In This Issue—*The Dealer's Finance Problem*

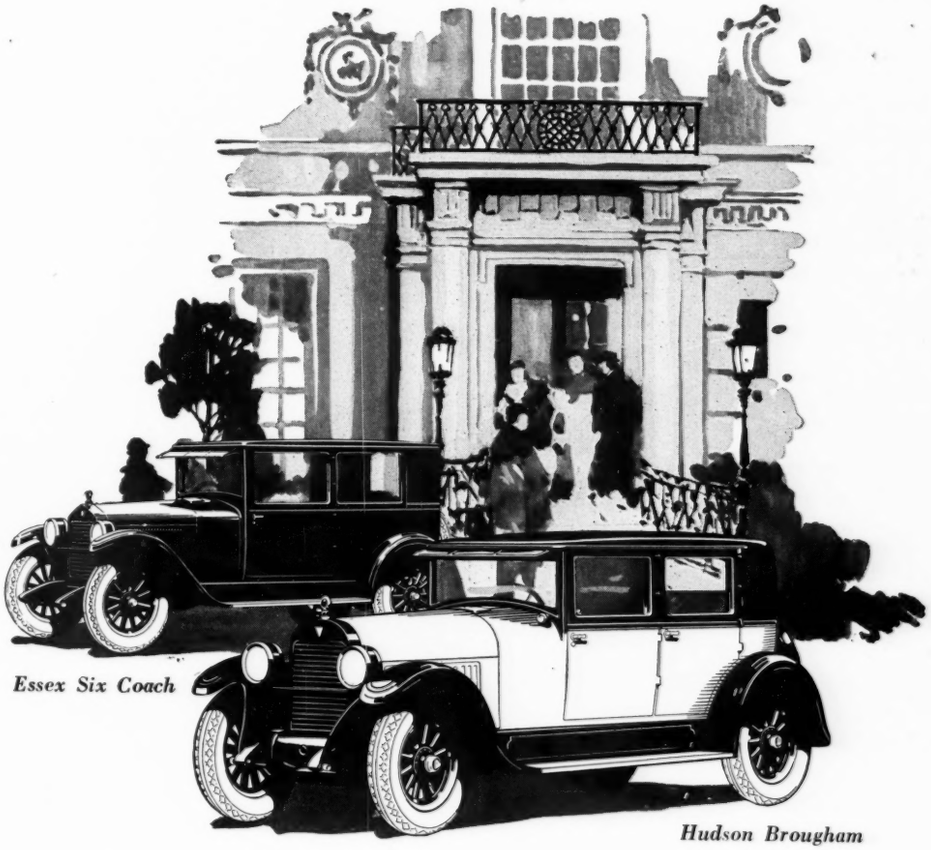
MOTOR AGE

Vol. XLIX
Number 6

PUBLISHED WEEKLY AT 5 SOUTH WABASH AVENUE
CHICAGO, FEBRUARY 11, 1926

Thirty-five Cents a Copy
Three Dollars a Year

HUDSON-ESSEX



Essex Six Coach

Hudson Brougham

World's Largest Selling "Sixes" Because World's Greatest Values

In the ever-widening "Six" market Hudson-Essex represent the most profitable and satisfactory line to sell as well as the "World's Greatest Values" to the buyer.

HUDSON MOTOR CAR COMPANY, Detroit, Mich.

Entered as second-class matter Sept. 19, 1899, at the post office at Chicago, Ill., under Act of March 3, 1879.

New Bonney No. 1 Sample Kit

$2.50

Attractive Discounts to Dealers

Three Bonney *CV Chrome Vanadium double end Engineer's Wrenches for the six most popular SAE bolts ($^3/_{16}$", $^1/_4$", $^5/_{16}$", $^3/_8$", $^1/_2$", $^9/_{16}$") in a leatherette kit. The price, $2.50, is less than the regular price of the three wrenches if purchased individually, no charge being made for the leatherette kit.

This sample kit is offered at this price because we know that after a mechanic has used a few Bonney Chrome Vanadium Wrenches nothing else will satisfy him.



You can secure from your jobber. Write for detailed information.

Bonney Forge & Tool Works
Allentown, Pa.

Makers of Special Service Wrenches of Chrome Vanadium, Carbon Steel Drop Forged Wrenches, Stillson Wrenches, Vises and Drop Forgings and the Bonney Rim Tool.

BONNEY
Chrome-"CV"-Vanadium
WRENCHES

REG. U.S. PAT. OFF.

(*Patents Pending*)

A PROFITABLE RESALE ITEM

This kit is ideal for the automobile owner, containing genuine Bonney *CV Chrome Vanadium Wrenches of the sizes most used, in an attractive tool roll, at a price that anyone can afford to pay.

*CV is a Bonney trademark registered in the U.S. Patent Office.

Chrome Vanadium registered August 11, 1925.

BONNEY
"ONLY THE BEST"



THE NEW MOON LINE



MOON-DIANA Amazing New Prices

MOON SIX		DIANA EIGHT	
De Luxe Coach	$1295	Roadster	$1695
Roadster	$1395	Phaeton	$1695
4-Door Standard Sedan	$1445	Cabriolet Roadster	$1995
Cabriolet Roadster	$1545	2-Door Brougham	$1795
De Luxe Sedan	$1595	4-Door Sedan De Luxe	$1995

All Prices F. O. B. Factories

A 36 per cent increase over 1924—an estimated demand for a 41 per cent increase in 1926—Tremendous factory expansions and economies—Moon's enlistment of the best designing and manufacturing brains in America—$75,000,000 in assets, pledged to produce the greatest quality values.

These prices give you a complete line of sixes and eights at the best quality value on today's market, with a contract and a policy that is planned for the best interests of the dealer.

MOON MOTOR CAR COMPANY - - - ST. LOUIS

DIANA "8" IS ALSO PRODUCED BY THIS COMPANY

ECLIPSE
BENDIX DRIVE



For Your Convenience

PRACTICALLY every make of car, truck and taxicab can be serviced with this convenient Service Assortment of Eclipse Bendix Springs. Contains ten springs of eight different types. The red and yellow label on every spring insures the highest standard of satisfactory, dependable service. Order this assortment from your jobber now.

Send for these Service Bulletins

To give every repairman authentic and understandable information on the proper servicing of the Eclipse Bendix Drive, bulletins dealing with its various phases are issued regularly. We will be glad to send them to you without charge. Just fill out coupon below and mail today.

ECLIPSE MACHINE COMPANY, ELMIRA, N. Y.

ECLIPSE MACHINE COMPANY, HOBOKEN, N. J.
ECLIPSE MACHINE COMPANY, Ltd., WALKERVILLE, ONTARIO

Eclipse Machine Company
Elmira, New York
Department 7

MAIL THIS COUPON

Please send at once your useful Service Bulletins on the Eclipse Bendix Drive; also name of nearest distributor of Genuine Parts for the Eclipse Bendix Drive.

*Name*_____

*Address*_____

*City*_____

MOTOR AGE

Reg. U. S. Pat. Office

VOL. XLIX No. 6

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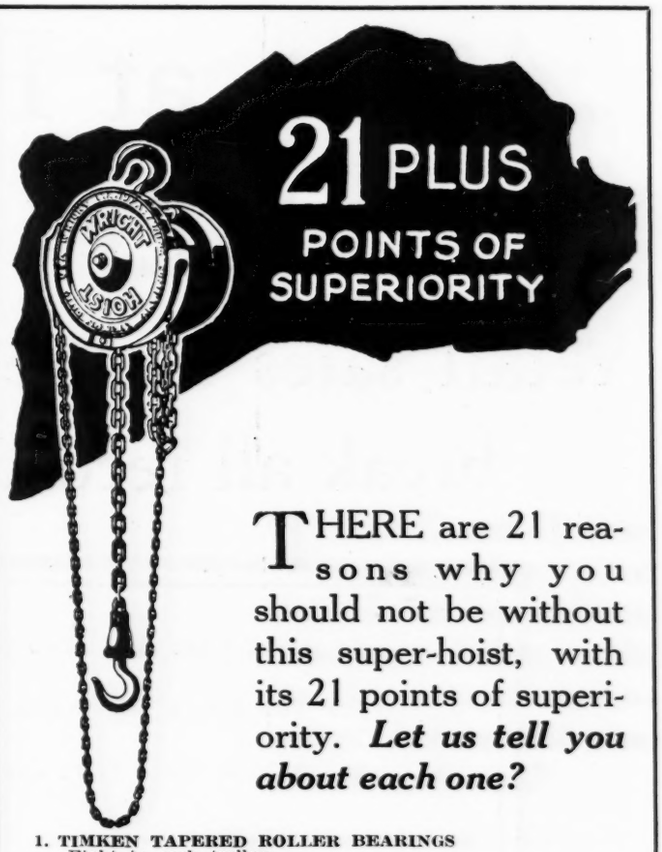
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Entered as Second Class Matter, Sept. 19, 1899, at the Post Office at Chicago, Ill., under Act of March 3, 1879



THERE are 21 reasons why you should not be without this super-hoist, with its 21 points of superiority. ***Let us tell you about each one?***

1. **TIMKEN TAPERED ROLLER BEARINGS**
   Eight to each trolley.
2. **STEEL SIDE PLATES**
   Bumpers protect wheel flanges and treads.
3. **CHILLED TREAD WHEELS**
   Absolute roundness insures ease in handling load.
4. **STEEL EQUALIZING PIN**
   Permits placing trolley on I-Beam at any point and insures equal distribution of the load on the four wheels.
5. **STEEL HANGER PLATE**
   May be eliminated and hook hung on equalizing pin to save headroom.
6. **STEEL HOOK—DROP FORGED—PROOF TESTED**
   The strongest part of the hoist. This hook never opens to drop the hoist and load.
7. **STEEL DROP FORGED CROSS HEAD**
8. **SAFETY LOAD CHAIN GUARD**
   Completely shrouds the upper half of load wheel, holding six links of load chain in wheel at all times.
9. **STEEL LOAD WHEEL**
   Special analysis electric steel casting, annealed.
10. **OIL TUBES**
    To insure positive and easy lubrication at vital points.
11. **MAIN DRIVING SPINDLE AND PINION**
    Upset forging S. A. E. steel 1035—heat treated.
12. **BRONZE BUSHED LOAD SHEAVE**
13. **BALL BEARING DRIVING SPINDLE**
    Where speed is greatest. Not subjected to heavy and shock loads. Eliminates wear on this part.
14. **STEEL SUSPENSION PLATES**
    An extra precaution to care for heavy overloads.
15. **NON FOULING HAND CHAIN GUIDE**
    (Malleable Iron)
16. **GEAR COVER—EXTRA HEAVY**
    Pressed from ⅛" plate. Insures permanency.
17. **STEEL CHAIN—ELECTRIC WELDED**
    Special heat treated and proof tested. An elastic limit 4½ times rated capacity, and breaking strength 6½ times rated capacity.
18. **STEEL HOOK—DROP FORGED—PROOF TESTED**
    Never opens to drop the load.
19. **DETACHABLE STEEL COUPLING—DROP FORGED**
    Completely enclosed Ball Bearing. Easily detachable to renew chain. Load is not held on connecting bolts, but by the forgings.
20. **BALL THRUST BEARING ON BOTTOM SWIVEL HOOK**
    Permits easy swiveling of load. Insures load chain hanging straight and feeding perfectly straight into load sheave pockets. This insures longer life to chain and wheel the greatest point of friction and wear.
21. **OIL CUPS SPRING COVER IN ALL OIL HOLES**

ASK US ABOUT THEM

WRIGHT MANUFACTURING COMPANY
Lisbon, Ohio, U S A

IMPROVED HIGH SPEED HOIST

Again at Philadelphia

NEW STUTZ

retail sales at the Automobile Show break all records of the industry

We hereby certify that a total of 177 retail orders for New Stutz Cars were taken at the Philadelphia Automobile Show from January 16th to January 23rd (inclusive) 1926.

These orders represent a combined value of $584,100, and were taken from individual buyers, no wholesale orders being included in the above figures.

S. R. BLOCKSOM MOTOR COMPANY.

S R Wheeler.

General Manager

GERTRUDE M. GOULD, NOTARY PUBLIC PHILA. PA.

Sworn and Subscribed to before me this 25th day of January 1926.

Gertrude M Gould

Notary Public

My commission expires 3-12-27

STUTZ SAFETY CHASSIS 8

At NEW YORK

NEW STUTZ retail sales at the New York Automobile Show, Jan. 9th to 16th, 1926:

175 cars, representing a value of $577,500

This breaks the record of all New York Automobile Shows.

DEALERS

who are interested in this record-selling automobile are invited to write or wire for full information.

STUTZ MOTOR CAR COMPANY of AMERICA, Inc.
Indianapolis

How Studebaker Sells the Public *on the Dealer as well as on the Car*

THE SATURDAY EVENING POST February 13, 1926

When You Buy a Used Car

The name on the dealer's door may mean more than the name on the radiator



Pledge to the Public on Used Car Sales

1 All used cars offered to the public shall be honestly represented.

If a car is unsalable only for a mechanic who can rebuild it, or for some one who requires only a few months' rough usage on a camping trip, it must be sold on that basis. Each car must be sold for just what it is.

2 All Studebaker automobiles which are sold as CERTIFIED CARS have been properly reconditioned, and carry a 30-day guarantee for replacement of defective parts and free service on adjustments.

This is possible because tremendous reserve mileage has been built into every Studebaker, which it is impossible to exhaust in years.

3 Every used car is conspicuously marked with its price in plain figures, and that price, just as the price of our new cars, is rigidly maintained.

The public can deal in confidence and safety only with the dealer whose policy is "one price only—the same price to all." For, in all cars on the basis, every one of them must be honestly priced to begin with.

4 Every purchaser of a used car may drive it for five days, and then, if not satisfied for any reason, turn it back and apply the money paid as a credit on the purchase of any other car in stock—new or used.

It is assumed, of course, that the car has not been smashed up by collision or other accident in the meantime.

Not only to the public, but also to The Studebaker Corporation of America, whose cars we sell, we pledge adherence to the above policy in selling used cars.

By Your Studebaker Dealer



THERE are seventeen million used cars in the United States. The finest motor that rolls down Fifth Avenue is a used car.

The value of a used car is governed by these 3 important factors:

1. What the maker put into it.
2. How it has been used.
3. How it has been reconditioned.

Many shrewd buyers realize that it is sensible economy to buy a fine used car with a great deal of unused quality transportation rather than a cheaply constructed new car.

Under the Studebaker Dealers' Used Car Pledge you are able to buy unused transportation with maximum safety. As a guaranty that the car you buy has been properly reconditioned and is as represented, you are offered 5 days trial.

No matter what make of used car you intend buying, you can't afford to purchase without seeing the Studebaker dealer's stock. He sells unused transportation on the same high plane that distinguishes his merchandising of new One-Profit Studebakers.

Why Men of Judgment Buy Studebakers

Worthily Made—Worthily Sold

One-Profit Value

1 Studebaker is the only One-Profit car in the quality field—the only car which has *all* bodies, *all* engines, *all* axles, *all* clutches, gear sets, springs, differentials, steering gears, brakes, gray-iron castings and drop forgings designed, engineered and manufactured by one organization. Therefore prices are down to bed rock.

Unit-Built Construction

2 Studebaker facilities make possible Unit-Built construction. Since the entire car is designed and built as a unit, it functions smoothly and yields scores of thousands of miles of excess transportation.

Always Kept Up-To-Date

3 Studebaker's $100,000,000 facilities enable us to keep cars constantly up-to-date. Improvements are continually added, so that Studebaker buyers may have the immediate advantage of our engineering achievements.

Low Finance Rates

4 Purchasers may buy Studebaker cars out of income at the lowest time-payment rates known to the industry.

World-Wide Service

5 Studebaker cars are sold and serviced by a world-wide organization of responsible merchants.

THIS IS A STUDEBAKER YEAR

The Country Has Gone Nash

Nash January Sales Top Last January by a Full 45%

And January 1925 was Greatest January in Nash History

Though 1925 was a record-breaking Nash year in production and sales the New Year has already started stepping 'way past the best previous high marks.

January 1926 sales and production swept beyond the history-making record set last January by a full 45%.

And so the first month of 1926 becomes the 17th consecutive month that Nash has marketed more cars than in the corresponding month of the previous year.

—with the sole exception of November 1925 when production was arbitrarily halted to permit bringing the new "Enclosed Car" Motor into manufacture.

NASH (2896)

Leads the World in Motor Car Value



The soundest reason in the world why you should investigate the James line is that hundreds of dealers, like yourself, are satisfying their customers and making money with these better valves.

James Motor Valves are made for all cars and trucks on the road in standard and $\frac{1}{64}$" oversize stems. Built to exact car manufacturer's specifications.

Ask your Jobber's salesman!

James Motor Valve Company
1314 Maple Street, Detroit, Mich.



JAMES
MOTOR VALVES



Serves the Entire Market

Today, more positively than ever, a Chrysler dealership is the greatest profit-making franchise the industry holds.

A Chrysler dealer has the new super-fine Chrysler Imperial "80"—at $2645 to $3695—appealing to the topmost market.

A Chrysler dealer has the Chrysler "70"—at $1395 to $2095—whose astounding success of the past two years takes rank with the foremost achievements in American business.

A Chrysler dealer has the equally sensational Chrysler "58"—at $845 to $995—selling at electrifying new lower prices.

In these three great cars a Chrysler dealer today has a complete high quality line—nineteen fine body styles—to interest every prospect in his community who desires a motor car of utmost worth and value.

There are a few desirable dealer points still available. Your inquiry will be treated in strictest confidence.

CHRYSLER SALES CORPORATION, DETROIT, MICHIGAN
CHRYSLER CORPORATION OF CANADA, LTD., WINDSOR, ONT.

CHRYSLER

Volume XLIX MOTOR AGE Number 6

CHICAGO, FEBRUARY 11, 1926

New President of

National Automobile Dealers Association

Is Successful Dealer

Charles B. Warren, Formerly a Factory Road Salesman, Now Distributor in Four States, Elected Head of N. A. D. A. at Ninth Annual Convention

THE new president of the National Automobile Dealers Association, elected at the ninth annual convention in Chicago, Feb. 2, is Charles B. Warren who as Nash distributor in New York City and other eastern points is one of the largest wholesale and retail dealers in the United States.

As president of the National dealers' organization Mr. Warren becomes the spokesman for a rapidly growing and powerful group of the country's best dealers, and he brings to this organization the personal prestige and influence that he has acquired in his remarkable business career.

Although Mr. Warren is today the wholesale distributor of between 17 and 20 per cent of the entire production of the Nash factories, he entered upon his present business enterprise less than nine years ago. Now at the age of about 45 he is one of the outstanding examples of a successful automobile dealer and distributor.

At the age of 20 Mr. Warren left a North Dakota farm to begin a business career. His first connection with the automobile business was a road salesman for the Haynes company. He then successively managed the Cleveland branch for the Stearns car and was sent to New York for the Haynes Company to direct retail sales of the factory branch in that city. He returned to Kokomo, Indiana, about 1907, to accept a job as factory sales manager for the Haynes car, and about four years later was made general factory manager. From 1913 to 1917 Mr. Warren was general manager of the General Motors Truck Company in New York City, which position he resigned when selected by Charles W. Nash for the New York and Buffalo Nash distributorships.



Charles B. Warren, President National Automobile Dealers Association

From small beginnings, eight years ago, Mr. Warren has developed an efficient selling organization of several hundred dealers, in four states, devoted to the retail merchandising of Nash and Ajax cars and products, and also has strong retail selling organizations in New York, Buffalo and Syracuse.

Mr. Warren now is president of the Warren Nash Motor Corporation of New York and the Nash Buffalo Corporation of Buffalo. With these two companies he covers the large eastern territory including all of New York state and parts of Connecticut, New Jersey and Pennsylvania.

Other officers elected by the N. A. D. A. are:

First vice-president, William L. Hughson, Ford dealer, San Francisco.

Second vice-president, C. C. Coddington, Buick distributor, Charlotte, N. C.

Treasurer, F. W. A. Vesper, Buick distributor, St. Louis.

Newly elected members of the board of directors are:

Clarence Fisher, Uppercu-Cadillac Co., Newark, N. J.; George Hoeveler, Stutz and Cleveland, distributor, Pittsburg, Pa.; Byron C. Foy, Chrysler dealer, Detroit, and James E. Harris, Nash distributor, Charlotte, N. C.

The Dealer's Fin
CLAIM Attention



William L. Hughson, Ford dealer, newly elected first vice president of the N. A. D. A.

THE National Automobile Dealers' Association, at the Ninth Annual Convention in Chicago during the National Show, strongly denounced too liberal finance terms in the sale of automobiles as detrimental to the best interests of the automobile merchant and the industry in general. Furthermore, as the spokesman of the dealer, it definitely outlined a financing platform which it is prepared to aggressively promote in 1926.

That platform, adopted in the form of a resolution, recommended the following methods in handling time sales:

1—That all finance companies adhere to the standard term requiring one-third down payment and completion of the deal within twelve months on new cars, and forty per cent down, balance in not more than twelve months on used cars.

2—That commercial bankers revise standards of commercial credit to allow greater credit to automobile dealers, with fast turning lines, than those in other lines whose goods move more slowly.

3—Elimination of all dealer endorsement of customer paper as a means of removing a legal contingent liability. This also includes elimination of all practices requiring the dealer to sign a separate repurchase agreement where his paper is taken without recourse.

4—That where dealer endorsement is required, the dealer be allowed to charge a sum sufficient to set up an adequate reserve to cover himself for the risk he is guaranteeing.

5—That the practice of manufacturers who are paying subsidies to finance companies be immediately discontinued.

6—That every encouragement be given to local independent finance companies who have played a tremendous part in the upbuilding of volume sales in the automobile industry.

7—That the automobile dealer be allowed complete freedom of choice in his selection of the finance company with which he is to do business.

8—Grant the right of the manufacturer to set maximums above which the cost of financing must not go, but these limits should be made with a view of permitting the finance companies to charge the maximum legal rate of interest, plus actual cost of making adequate credit investigation, plus the actual cost of maintaining a diligent collection force, plus an adequate reserve to protect either the finance company on non-recourse or the dealer where endorsement is required, plus a legitimate profit to the finance company.

9—That all advertising campaigns in which unwarranted stress is made of low rates and low down payments be immediately withdrawn or cancelled and that no new similar campaigns be contemplated or executed.

10—That the automobile dealers throughout the United States support this platform.

This action of the N. A. D. A. followed a day's session given entirely to the finance question, in which the principal speakers were: C. C. Hanch, general manager, National Association of Finance Companies; Charles E. Gambill, Chicago Hupmobile distributor and retiring president of the N. A. D. A., and Emlen S. Hare, vice-president, Hare & Chase.

While holding strongly to the soundness and desirability of time payments in automobile buying on a proper basis, Mr. Hanch pleaded that all branches of the automobile industry keep unimpaired the methods that in the past have proved sound and profitable.

"It is gratifying to say that the tendency to deviate from sound credit terms has apparently passed the peak," said Mr. Hanch, "and there seems to be a disposition on the part of both dealers and finance companies to keep terms within safe limits. If this situation is not upset by excessive competition among manufacturers, bankers throughout the United States undoubtedly will continue to loan large sums of money to prudently managed finance companies so that a large production of automobiles may be continued and the general prosperity of the nation promoted.

"To accomplish this result there should be co-operation of manufacturers, dealers and finance companies with the approval and support of the bankers. Any tendency toward unsound policies or practices should be eliminated. Practices which do not offer an adequate profit to the dealer are unsound. Practices which prevent the dealer from freely functioning as an independent merchant are unsound. The practice of giving and receiving rebates must be abandoned. This does not refer to legitimate compensation to dealers for assuming by endorsement or repurchase agreement, a part of the hazard in connection with automobile financing. Floor stock financing must be carefully checked so as to make sure that cars are not financed which are not in stock. Duplicate financing must be prevented. The dealer should make a sufficient investment in floor stock so that he has more than a moral obligation to sell it. The value of the used car must not be inflated before it is financed."

In addition to presenting a survey of average experiences in various forms of finance terms, Mr. Hanch presented some new data concerning time sales that was intensely interesting.

Among these was the actual setting by investigation of a broad nature of seventy-five and one-half per cent

ancing Problems *of the N. A. D. A.*

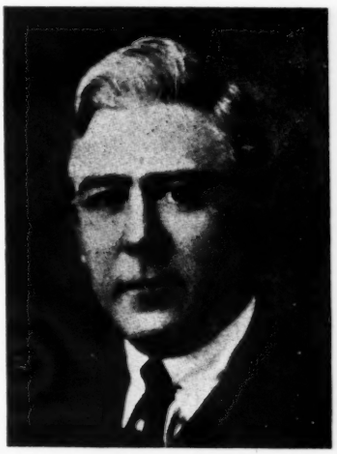
as the proportion of car sales now made on the time payment basis. Concerning this he said. "An average of seventy-five and one-half per cent of all motor vehicles is now sold on the installment plan. According to N. A. C. C. figures there were produced 3,833,000 passenger cars and 492,000 trucks in 1925. The 1925 average note, at time of purchase, on new cars was about $530, and the average note on new trucks was about $765. The 1925 average note, at time of purchase, on used cars was about $280, and the average note on used trucks was about $380. THE RATIO OF USED CARS TRADED IN ON NEW CARS WAS 80 USED CARS TO EVERY 100 NEW CARS SOLD."

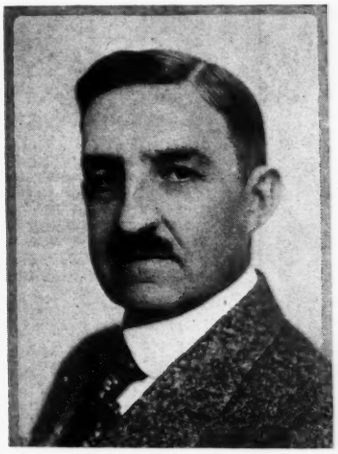
Answering the critics of volume installment sales in general and of automobile financing in particular, and to correct the exaggerated idea in the public mind relative to the dealer's gross profit, Mr. Hanch presented the following tabulation of the total volume of retail automobile paper during the past year:

Total wholesale value of cars and trucks	$3,000,000,000
Dealers' gross discount to cover all expenses and net profit	800,000,000
War excise taxes	100,000,000
Freight and delivery charges	200,000,000
Total retail value of cars and trucks	4,100,000,000
Total value motor vehicles sold for cash	1,000,000,000
Total value motor vehicles sold on installment plan	3,100,000,000
Total amount of cash down payment	1,000,000,000
Total amount deferred payments on new cars	2,100,000,000
Total amount deferred payments on used cars	900,000,000
Total volume new and used car paper financed during year	3,000,000,000
Total amount of paper outstanding at given time	1,500,000,000

Mr. Gambill warned that industrial future, not only in automotive lines, but all others, rested on financial safety and he pointed out the precarious position that straining of financial sources through too liberal time sales will develop.

Emlen S. Hare presented a paper outlining the advantages of non-recourse financing.





Left: C. C. Coddington, 2nd vice-president N. A. D. A.; right: F. W. A. Vesper, treasurer of the association.

factory alike, the merchandising session also was largely attended and enthusiastically received.

This program included a talk by Edward Payton, market analyst with the N. A. D. A., whose work among distributors in helping them to find potential markets and obtain greater sales penetration has attracted the attention of the entire industry, entitled: "Planning the Car Sales for 1926." Other features were, "Can 1920 Model Salesman Close 1926 Buyers?" by H. D. Bullock, sales specialist of the N. A. D. A.; "Dealers' Dollars and Used Car Sense," A. R. Kroh, Sales Promotion Advisor of N. A. D. A., and "Sell Cars—Not Terms," William B. Burruss, sales consultant, N. A. D. A.

The convention program also included a most complete and interesting presentation of 1926 marketing possibilities by James H. Collins, Vice-President and Research Director of the Chilton Class Journal Co.

The association adopted a resolution again appealing to Congress for the complete repeal and elimination of the so-called war tax.

In the absence of Harry M. Fancher, Secretary-Treasurer of Tom Botterill, Inc., Denver Hudson & Essex distributor, whose educational work with the N. A. D. A. in management and accounting has attracted nationwide commendation, G. V. Orr, President of the Overland Motor Co., Chicago, presented his unique plan of dealer education and co-operation in management to insure profitable business. Mr. Fancher was ill and unable to attend.

Tabulation of Average Experiences Based On One Year's Record of Many Automobile Finance Companies—Completed Nov. 1, 1925

	Losses on Repossessed Cars			Repossession Ratio New Cars			Repossession Ratio Used Cars		Used Car	% of	Special Paper	
	12 Monthly Payments	16-18 Monthly Payments	19 + Monthly Payments	⅛ Down Payment	¼ Down Payment	24% & Less Down Payment	40% Down Payment	36% and Less Down Payment	Paper % of Total	Companies requiring Dealers Endorsement Used Cars	13 + Monthly Payments	35%—Used 25%—New Down Payment
Average	$50	$78	$220	1¾%	3 8/10%	11%	3%	6 1/6%	31%	94%	18 1/3%	19 1/3%
Above Standard		56 2/3%	341 1/3%		121½%	537%		104 2/3%				
Repossession Loss Ratio 12 Mo.				.163%	.36%	1.041%	.536%	1.1%				
Repossession Loss Ratio 16-18 Mo.				.254%	.563%	1.625%	.839%	1.716%				
Repossession Loss Ratio 19 Mo.				.716%	1.587%	4.583%	2.537%	4.84%				

Serving the Repair With Repla



LEON F. BANIGAN
Editor
Motor World Wholesale

By LEON F. BANIGAN
Editor of Motor World Wholesale

WHAT you, as manufacturers, are interested in is how replacement parts can be most effectively and economically distributed.

You are looking into the future to discern if you can, the method of distribution that will give your products the best channels through which to reach the car owner.

There is just one economic reason for your existence as manufacturers of maintenance parts—to render maintenance service and help provide more continuous and satisfactory transportation.

So you are not in doubt as to what you want to do. But some of you are bewildered as to how you want to do it.

Most of our difficulties in replacement parts distribution at the present time are due, it seems to me, to the fact that some of us are still trying to distribute parts through channels and methods that were in vogue ten years ago. We have not caught the picture of the tremendous expansion of the replacement parts market and the changing channels of distribution to serve that market.

We are trying to do our daily dozen in parts distribution in the pants we wore ten years ago. No wonder they pinch and bind and tear and rip—and we have our embarrassing moments.

One of the strongest criticisms of our methods that I have heard is that they start at the factory and expect to make the customers conform to them instead of starting with the customer, giving due heed to his needs and buying preferences and conforming to them all the way up to the factory.

In my talk today I hope to present two major ideas:

Registration Is Barometer

1. The tremendous growth of the replacement parts market in the last decade.
2. The effects of the growth of that market upon buying habits and distribution methods.

Let's get a mental picture of our market. And first of all let's recognize the fact that car and truck registration is the barometer of the replacement parts market.

While motor vehicle sales have fluctuated up and down in ten years maintenance and operation sales which create the demand for parts have gained steadily, even in years of depression. They follow the registration curve.

Then let's study the registration curve for the past ten years.

In 1915 when the general automotive jobber became a factor in distribution there were 2,500,000 cars and trucks in the United States.

In 1915 there were about 25,000 repair shops, and there were approximately 100 vehicles to each repair shop.

In 1925 there were 75,000 repair shops—and there were 266 vehicles to each shop.

Ten years ago motor vehicle sales amounted to 80 per cent of the automotive market.

Five years ago car and truck sales were only 60 to 65 per cent of the automotive market.

In 1925 motor vehicle sales dropped to 44 per cent of the market and 56 per cent of the money spent in all automotive establishments was for replacement parts, maintenance and operation.

So much for the national picture of our tremendous growth in the replacement parts market.

But let's look at the picture sectionally.

In 1915 there were 510,000 vehicles in the west north central states of Minnesota, Missouri, Iowa, Nebraska and North and South Dakota. In 1925 in that great farm and rural section there were 3,000,000 motor vehicles or half a million more than in the entire United States ten years ago.

Take the Middle Atlantic States of New York, New Jersey and Pennsylvania. In 1915 they had 472,000 cars and trucks. Today they have 3,500,000—a clean cool million more than the whole United States ten years ago.

Let's compare some of the other sections, they are all mighty interesting.

Realizing these conditions, is it any wonder that some of our wholesalers who are recognized as old line jobbers are drawing in their horns? With this tremendous growth in registration—the potential market for replacement parts and supplies—they are now able to cover as large a market in half a state or even a couple of counties as they used to cover in three or four states a few years ago.

And now we begin to see why the replacement parts specialist has come into the picture and why the changing channels of distribution.

Changed Conditions

Division of labor and specialization came in the automobile industry to make production more effective and economical.

Division of labor and specialization is coming in automotive distribution for the same purpose. This may take the form of more wholesalers or more departmentization of existing wholesalers—or both. The final answer will probably be—both.

Ten years ago when the practice of distributing through a selected few jobbers was accepted as good practice, most of our motor vehicles were in the cities. They were the toys of our people.

People didn't mind waiting a week or ten days for the repair man to order parts by mail or from the salesman of the jobber who covered three or four states and got around a couple of times a month.

Today ten hours is a long time to be without your car because it is a part of the very fabric of your daily life.

And because people won't wait even ten hours for their cars and trucks nowadays, it has become good profitable distribution practice for local distributors special wholesalers—to place convenient stocks at convenient places to serve repair men and their customers.

It's the changing channels of distribution.

A jobber or distributor may assemble an adequate stock of reputable lines, employ well trained men who know their onions, publish a catalog, and still find his sales limited to a territory closely surrounding his store.

Beyond a certain point the resistance of remoteness of stock cannot be overcome profitably. Once this point is reached, more distributors or service stocks in the hands of existing distributors is necessary.

But that makes more jobbers!

Well, what of it. If there are half a million more cars and trucks today in the farm states of the northeast than there

Shop cement Parts

(An address delivered by Mr. Banigan at the Chicago Show Meeting of the Automotive Manufacturers Association.)



were in the whole United States ten years ago and if people want them fixed ten times as fast as they wanted them in those days—and the repair man won't buy a part until he knows he needs it, doesn't that mean more stocks, conveniently located to render the service you are in business to render.

I wouldn't worry about "making" more wholesalers. You can't make grass grow on a stone. And you can't make replacement parts jobbers where there isn't an economic need for them.

Of course, you must satisfy yourself that there is an economic need for them and at what points that economic need exists.

Some general line jobbers today are recognizing the economic need for more replacement parts distribution units by establishing service stocks and branches at strategic distribution points—and where the economic need is not being met in this way or where they are not doing a good job—independent replacement parts wholesalers are coming in to do that job.

Repair Shops Follow Population

But the tremendous growth of the market—a market that will continue to expand as long as car ownership grows is not the only factor that is forcing specialization and localization of parts distribution.

The motor car itself, is changing the buying habits of the people.

Car ownership has made it possible and desirable to live apart from the noise and dust and congestion of the city. City populations are moving out on suburban hillsides and repair men are finding it profitable to establish businesses in these small communities.

The changed living conditions made possible by the motor car have changed buying habits.

Today the suburban dweller buys convenience items—and maintenance is a convenience item—near at hand, if it is available just as he buys his soap, salt and bread at the community store. And he goes to town only for his shopping items—those in which price and style are factors.

He may shop for the car he buys—but he buys maintenance on a convenience basis.

And the repair man who sells his maintenance is a small business man in a small town. He can't afford to stock parts and he buys them when he needs them and where he can get them easiest.

The repair man, furthermore, expects his jobber to provide parts for popular and orphan cars alike. The mechanic who values his time at $1.00 an hour or more won't go to his jobber for popular numbers, and run all over the county for the slow moving items. He judges his jobber on his ability to quickly furnish such parts as he needs when he needs them.

Quality must be right and the merchandise must flow to him smoothly.

And right here is where a lot of factory plans for short circuiting the economic channels of parts distribution go on the rocks. A manufacturer may say: "We will skimp on material, workmanship, and accuracy just a wee bit—and crash the market on a price basis. We'll get out an inferior article, sell it way under the price of the original gadget, give longer discounts, put it on a few jobbers shelves—and the repair man will walk a mile for Camels." But he won't.

Availability of your merchandising and quality are first and second with the repair man and price is a poor third. The mechanic needs, first of all a ready supply, saving his time and effort and next he needs dependable merchandise that will make his workmanship satisfactory to his customers.

Inferior merchandise with a price appeal has only a limited market, principally among that type of repair man that is not dependable from the car owner's standpoint and hence, undesirable from your standpoint.

Turnover is a mighty important factor in profitable parts distribution both for the jobber and the factory. There is a real obsolesence in the parts business. As yet I have been unable to find anyone who knows what percentage of sales it actually equals. There is plenty of room for work here by the manufacturer's sales departments in making movement studies of various items and in helping the individual jobber to initially set his stock in correct proportion to turn-over and keep it there.

The General Motors of Canada plan, which I understand, is being used by some Buick dealers in this country at the present time, provides an interesting study of methods. In stocking for distribution of their parts, this company has classified various items aceording to rapidity of movement. Fast moving items are sold in larger numbers, limits are set on other classes of slower moving parts according to the registration of Buick cars in the distributor's territory, and parts that are seldom called for are shipped but sparingly, some actually being held at the factory or factory branch until ordered.

I should like to discuss some plans for stock control and inventory because I believe that there is need of greater appreciation of this problem of the parts distributor on the part of the manufacturer. Our time does not permit in this program for any more than a sketchy reference to some of the high spots of parts distribution.

An Economic Question

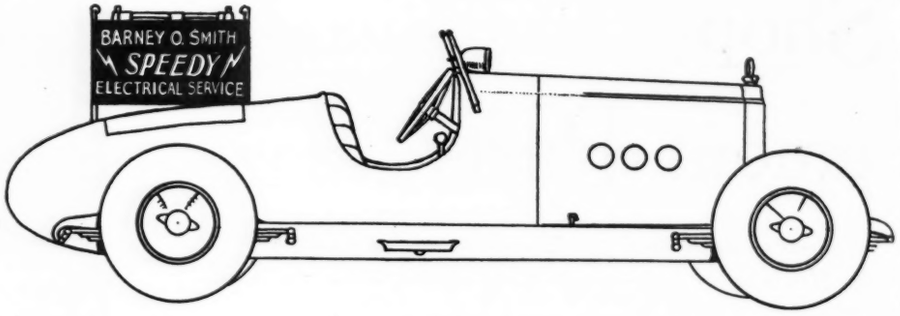
In conclusion, replacement parts distribution will not be decided by politics, ancestery, palmistry or astrology. It will have to be settled on a purely economic basis as a problem of profitable distribution.

Replacement parts will be distributed by the organization that handles them most effectively for all concerned from manufacturer to the ultimate consumer—and who makes a reasonable profit doing so.

The organization that will most effectively and profitably distribute replacement parts regardless of what it may call itself, will be the one that studies local registration figures and local competition, knows the market in its territory and the buying habits of its car owners—and plans its service to meet those conditions.

(*Continued on page* 16)

Magnetizing MAGNETO Magnets



Barney Oldfield Smith had put a sign on his car to tell the world he was on the job to give speedy service

The Red Head Explains How to Use Both the Iron Core and Hollow Coil Type Magnetizers

By A. H. Packer

B. O. SMITH, electrical expert, was making good. At least he had been successful so far with occasional assistance from Bill Fixit's men, Valvy and the Red Head, who were getting free board and room and having a much extended vacation on the Smith farm.

The first job and the biggest so far had been the installation of impulse couplings on the magnetos used on the motor driven snow plows used on the county roads, but one morning there was a comeback. The phone rang and over the wire came the voice of the superintendent, sour and rasping. Two of the snow machines would not start at all.

Young Smith could hardly get a word in edgewise. "Yes, there's gas in the tanks, you young freshy, but those couplings have gone bad." And Barney had to listen to a shower of static from the irate superintendent before he had a chance to say he would drive right over to the garages where the machines were kept and see what was wrong.

"It looks bad for the home team," he said to the Red Head and Valvy as he hung up the receiver and rang off. "I don't see what could have happened to those couplings, but that's what the old man says is wrong, so I'm going to drive right down the line and see for myself."

* * *

IT WAS a puzzled electrical trouble shooter that Bill Fixit's men greeted a few hours later, for not only was the magneto trouble so far unsolved, but his own speed car had suddenly begun to act up in a most peculiar way as he drove back. It did not miss, but seemed to buckle and jerk in a very disconcerting way, knocking as if the spark were too much advanced and at the same time showing so little power that it could hardly make the hills.

"Well, I brought the two mags back with me," said Smith, somewhat ruefully as his car stumbled into the yard. "They sure give a weak spark, but I think I know why. One of the wise birds over there tried to improve on our work, put some wire around the magnets and hooked his circuit up to the starter switch to make the magnets stronger when starting."

"Nothing much wrong with that," said Red. "Don't think it would do very much good but it wouldn't do any harm either. Of course if he got the current going the wrong way around by connecting his coil wrong it would probably demagnetize the magnets pretty thoroughly."

"I think that's just the answer," said Smith. "But when the boss wanted to know what was wrong this bird tried to lay the trouble on us. Worse than that. He seems to have gotten away with it so far."

"That gives you a ticklish job," said Valvy. "And I don't mean remagnetizing. You have to explain something to the superintendent and at the same time you are wise if you don't put the blame on the mechanic who pulled the boner. If you save his neck, he will be a good booster for you. Bill used to get by on such jobs with a good natured line of josh. He never would tell the real cause of the trouble, for in many cases the car owners wouldn't get it anyway. Might say the magneto had been imbibing the antifreeze solution too freely, probably imitating the boss, or something like that. And Bill would get away with it. That's something you have to learn along with the electrical dope."

Smith agreed that he had a diplomatic job on his hands as well as an electrical one, but was nearly as much concerned about his own car as he was with the two magnetos, for he was quite certain that all they needed was remagnetizing.

"How does she act," Red wanted to know. And Barney

BILL FIXIT STORY No. 15

Previous installments in this series by A. H. Packer were published March 19, April 2, April 16, May 7, May 21, June 18, July 30, August 13, September 3, September 24, October 22, December 10, and December 31, 1925.

SYNOPSIS: Bill Fixit's electrical trouble shooting men start on a trip in a Speedway car. They stop at various places along the way and in a mining community are robbed of all their money. This necessitates getting a job with the local electrician, to whom they give some helpful information gained in working in Bill Fixit's garage. Directional radio is used by government agents in locating a gang of crooks and the boys' money is recovered. The trip is continued and the night after leaving the mining town they stop with Barney Oldfield Smith, an amateur race driver and help him with a magneto job, where a new condenser is needed. The condenser is obtained from Bill Fixit's electrical station, but in the meantime Valvy discovers an old radio set, and the Red Head engineers a trouble shooting job on the set and restores it to its original usefulness.

Encouraged by the help given by Bill Fixit's men, Barney decides to start an electrical shop. His first job is the installation of impulse couplings on a number of snow removal machines operated by the county.

explained the broncho characteristics which had so suddenly developed.

"Let's see," said Red. "Ignition, carburetion, compression, timing and that's about all to check. Suppose we start with ignition which is the simplest to check. There are just two requirements for ignition and that makes it easy."

"Two? I thought there were a dozen at least," said young Smith.

"No, only two," said Red. "A spark every time at the right time. And that's all. Isn't it simple?"

"Sounds like it the way you put it," said Smith. "Suppose we check those two things, if it's as easy as it sounds."

Valvy disconnected the wires from the front spark plug and Smith started up the engine. The wire was held ⅛ in. from the top of the plug and a spark jumped every time. It hit every shot without a miss, so they speeded up the engine and while it ran in a peculiar jerky fashion, the spark continued to snap, snap, snap with perfect regularity.

Nor was that all, for the same test was made on each cylinder with the same results.

"All right," said Red. "Now for the timing." And as he spoke he slipped the cover from the magneto interrupter to check the time at which the interrupter points opened. But the test was never made for it proved unnecessary. A single glance showed what was wrong.

Where there should have been two half moon shaped cams securely riveted or screwed to the interrupter housing, there was but one so fastened.

The other was lying in the bottom of the housing, the screw gone, and every time the interrupter bumper came by, it shivered and jiggled back and forth giving a timing variation on two cylinders that easily accounted for the peculiar way in which the car operated.

Smith was wide eyed with astonishment, but also glad to have another illustration of the way the cause of trouble must come to light when systematic methods of running it down are used.

"A little thing to happen," he said. "But it sure played hob with the car on the hills and no wonder. I had two cylinders timed right and the other two with all sorts of timing, sometimes way advanced and sometimes retarded, depending on where that floating cam happened to be."

Valvy was nearly as interested as young Smith and volunteered to fix up the interrupter, so Smith and Red decided to fix up the magnetos from the snow plows.

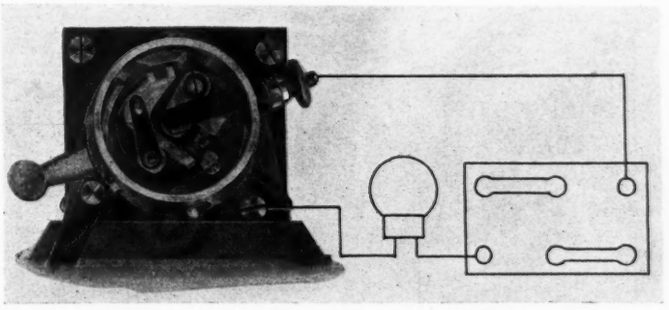


Fig. 1. Checking accuracy of cams to insure having sparks in different cylinders at same relative crank position.

"Before we do the magnetizing stunt," said Red. "I want to show you a way of accurately checking a magneto interrupter to see if the two cams give the same timing in different cylinders. Sometimes the trouble might not be as easy to find as it was on your car.

Synchronizing the Points

"The average shop man would not think of this easy test, but it is being stressed recently on account of the battery ignition systems for eight cylinder cars which use two sets of points. I refer to the timing of the spark in one cylinder with respect to the spark in another. For example if the spark in the No. 1 cylinder occurs five degrees ahead of dead center we do not want the spark in the next cylinder ten degrees early or there will be a difference in the power that the two cylinders develop and consequently a bad vibration that we cannot account for.

"In a magneto the cams are quite accurately made and under most circumstances do not need to be replaced. It is simple, however, to test the accuracy of the cams by means of the test shown in this sketch (Fig. 1). This is best done when the magneto has been assembled with the exception of replacing the magnets.

"A battery and lamp are connected as shown and the opening of the interrupter points will affect the lamp."

"Makes it go out, I guess," said Barney.

"Guess again," said Red. "There's a primary winding through which the lamp current can flow when the points separate, so there is never an open circuit, but the resistance of the primary will cause the lamp to dim somewhat when the points open. That serves our purpose for we can turn the shaft until the lamp dims and make a mark on the coupling in line with some point on the magneto. Then turn the shaft again until the lamp again dims. This will check the other cam, and if the two points are exactly 180 degress apart, then the timing is accurate."

"Now I will show you two days of magnetizing," continued Red. "In the first method we use a magnetizer of a type ordinarily used where a U shaped iron frame has coils on the two legs of the U.

"There are several mistakes that are frequently made but which can easily be avoided. One is to magnetize the magnets the wrong way by getting them on the magnetizer Another is to get one or more magnets reversed when installing on the magneto. In this sketch, however (Fig. 2) there is shown a method of preventing both these mistakes.

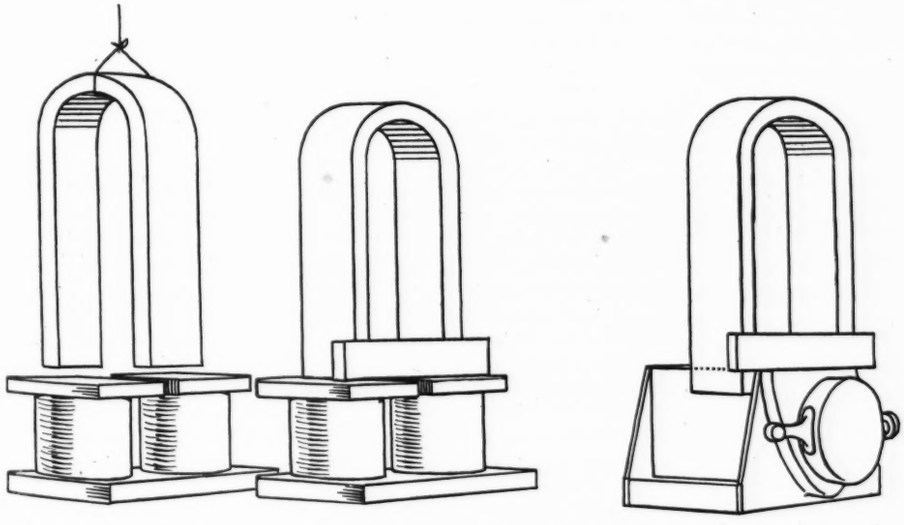


Fig. 2.—Charging magnets with typical charger in which an iron frame with two magnetizing coils is used

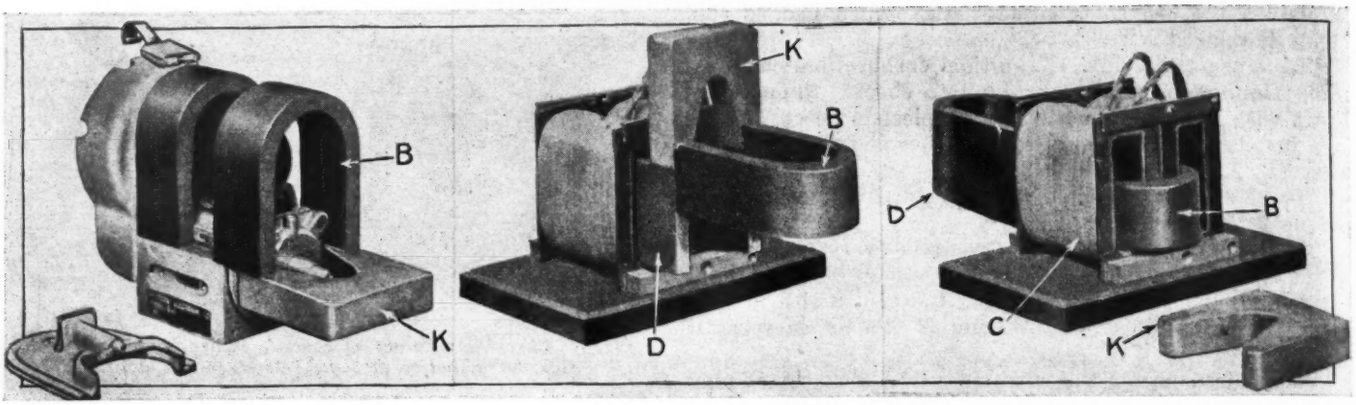


Fig. 3.—The hollow coil or solenoid type of magnet charger. In this type a dummy magnet of soft iron is used to complete the magnetic circuit

"At the left we have the magnetizer which must be connected to the battery, BEFORE we put the magnet on. Then hold the magnet over the magnetizer, suspending it with a string, or on the point of a pencil or even pivoted on your finger. Set it cross ways of the magnetizer and see which way it wants to go on. Then let it go that way. We then have the conditions shown in the middle view of the same sketch except that the bar of iron used as a keeper is not yet needed.

"Now when we know the right way to put the magnet on, we can rock it back and forth or lay it on its side on the magnetizer and draw it off of the magnetizer in such a way that the ends of the magnet come off last. This action of drawing the magnet across the magnetizer may be repeated several times after which the magnet should be stood up and a keeper applied as shown in the center view (Fig. 2).

"It is necessary to apply the keeper while the magnet is on the charger, then transfer both magnet and keeper as shown over to the magneto as shown in the right view (Fig. 2) and the keeper should not be taken off until the magnet has been pushed down about half an inch, so that it makes a good iron contact with the pole shoes of the magneto. Then the keeper may be taken off, for the pole shoes and armature of the magneto now act as a keeper.

"Another method of magnetizing is to use a device having hollow coils into which the legs of the U shaped magnet extend. Such a system of charging is explained by these three sketches (Fig. 3). At the left we have the condition where a magnet is just being removed from the magneto and at this point it would be well to check the polarity of the magnet and also that of the charger for it is essential to get the north pole of the magnet to go in at the coil which tests south.

"The piece marked K is a keeper or piece of soft iron, in this case so shaped that the extending shaft of the magneto does not interfere with its use. As indicated it is applied in such a way that the magnet slides to a contact with the keeper before it gets off of the magneto. In this way the iron circuit is never broken.

"In the center view the magnet has been turned over and is in contact with a dummy magnet or piece of soft iron used to complete the iron circuit through the coils of the magnetizer and back again. Again we see that the iron circuit is maintained. In the third step of the process as shown at the right, the magnet is pushed into the coils as far as it will go which makes the dummy magnet extend on the other side. When the current is turned on it applies the full effect of the ampere turns or magnetizing force at the place where it is most needed, that is, the legs of the magneto magnet.

"The process of replacing the magnet is just the reverse of that just outlined, although temporarily, while the other magnet is being charged, the first one removed could be kept in condition with a flat bar of iron used as a keeper.

"In all cases however, the transfer of the magnet should be accomplished without ever having the iron circuit broken. This gives the best results and a magneto that will easily start the engine."

Serving the Repair Shop with Replacement Parts

(*Continued from page* 16)

The general line jobber lost ground in the replacement parts field a few years ago, because as the number of his items rose, he found it good business to weed out the slow moving stock and put emphasis on the merchandise that moved quickest and returned him the best profit. And in trying to apply to replacement parts distribution the same principles that were successful in such things as automobiles and French horns, he learned this cardinal principle of replacement parts distribution, to wit:

An intelligently balanced stock of slow moving items must be carried to sell the more frequently called for parts.

Just now we find general line jobbers re-entering the replacement parts field and succeeding and failing—not because they are general line jobbers but because of their methods. We see specialty jobbers succeeding and failing in parts distribution for the same reasons—their methods.

By and large, distribution follows the course of least resistance just as water or electricity. Some replacement parts distributors are worrying because the general line jobber is looking favorably upon the market. Some general jobbers are wondering if replacement parts jobbers will gradually add shop equipment, supplies and accessories and compete with them all along the line.

Both of these things are happening right now—and they will continue to happen. The general jobber today is handling a respectable percentage of all the replacement parts not distributed by motor car factories through car distributors and dealers. But again, not because they are general jobbers, but because of the way they do the job.

It isn't practical to try legislation against the economic law of supply and demand. If the territory will support a parts jobber someone will enter the business there. Convenient stocks assure stock sales, that's the only reason for their existence. Acknowledge these facts and work out a distribution program strong enough to divert the business your way.

Let's not be bound too much by tradition. Let's approach the replacement parts problem with an open mind. Let's discard prejudices and try to find the solution that meets best the present tremendous market and the car owners who make that market.

New Opportunity Opens *for* ELECTRICAL SERVICE STATIONS

Merger of Automotive Electrical Association with Automotive Electrical Service Association Approved

By A. H. Packer

UNANIMOUS approval was given by members of the Automotive Electric Service Association to the proposition presented in regard to affiliating with the Automotive Electric Association. The vote was taken at the first session of a two day conference held at Chicago during show week after President R. R. Thomas had presented the plan, which had been worked out by joint conferences of the A. E. A. with the A. E. S. A. Board of Governors.

Instead of a separate organization for service station operators, there is now presented the opportunity of joining the Field Division of the Automotive Electric Association, composed of the largest makers of automotive electrical equipment.

To be identified with the other authorized service stations throughout the country will give many advantages, some of which may not appear at present, while the nominal annual dues of only $10 put this privilege within the reach of any worth while service station.

The working out of a uniform plan of flat rate operation and workman compensation is just one of the possibilities of an association of this sort where the service stations have the opportunity of benefiting by the experience and cooperation of the large manufacturers, just as a factory branch benefits by close relation with the parent company.

To represent the Field Division there will be thirteen members chosen from the service men who join and these will be selected, one from each federal reserve district, giving twelve representatives from the United States, the other representative being from Canada.

To join the Field Division it is necessary to have the application approved by representatives of five electrical concerns and two battery concerns which are affiliated with the A. E. A. This plan was adopted because it would help the members of both associations present at this meeting get acquainted with each other and would thus necessarily lead to good fellowship so essential in establishing cordial business relations. In this plan it is not necessary for service station operators making application to personally get the required approval, for this will be taken care of by the secretary of the association. Nor is it required that the accounts of those approving applications be handled by the service station operator making application.

Earl Turner who is secretary of the A. E. A. has his office at 5363 Hamilton Ave. N. E., Cleveland, Ohio, and will be glad to hear from service stations in regard to membership. In speaking of the new regime, A. D. Libby of Splitdorf, president of the association, expressed a desire to cooperate heartily and pointed out that service men and manufacturers were mutually dependent on each other and would each profit by working harmoniously together.

In the matter of representation it has been mentioned that thirteen representatives will be chosen from the ranks of the service men. These representatives will work with the factory representatives in presenting ideas which the service operators may have and in working out harmonious plans along any particular line.

One plan is to have an association sign for the members of the Field Division to use. This sign will have an emblem which the public will soon learn to recognize and will also have places where the factories represented may be shown.

In addition to the national association, it is urged upon members that they form local associations to handle problems in their respective fields and that factory representatives who may be in the vicinity at the time be invited to the meetings in order that a more friendly relation be established and to take advantage of the broad experience which the factory representative gets in traveling to the various localities.

The advantage of association work was clearly shown at this meeting in a talk by J. Harry Hearnen of Trenton, N. J., when he told of some of his experiences. His talk if applied should net those who heard it hundreds of dollars. In one instance he told of a saving of $1,300 in his insurance premiums which was made possible by studying building construction as applied to insurance rates and by patronizing an insurance man who not only wrote up the insurance but who also watched out for the interests of his customers.

He also showed ways of increasing winter profits, not only by means of radio but by doing work on small motors such as those for vacuum cleaners, sewing machines and washing machines. Another profitable activity he pointed out was that of radio charger overhaul, where a small stock of parts makes it possible to do a good sized business.

In the repair of bulb type chargers, he indicated that a new bulb sometimes constituted a repair. When the transformer gave trouble, the makers could be depended upon to make good.

In the case of sagging filaments he showed how the installating of another socket under the charger would make it possible to reverse the bulb every 100 hours of service and nearly double its life, this job applying more to rectifiers used in the service station than those repaired for radio customers.

These things brought up at this meeting are profitable possibilities which one man thinks of and passes along to his association friends which indicates just one of the ways that members can reap a harvest.

To Promote Interest of Electrical Service

AN event of show week in Chicago was the convention the Automotive Electric Association at which action was taken to make the organization heretofore known as the Automotive Electric Service Association a division of the first named organization. The enlarged organization will be representative of the entire country and will strive for the advancement of electrical service, both technically and in a business way.

SHOW TIME IS BANQUET

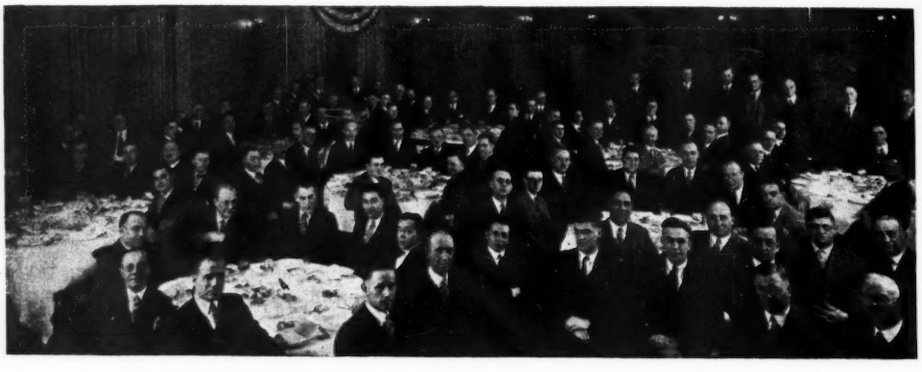


The panorama above shows the exceedingly beautiful Newark show held the last week in January.



Left: Studebaker Dealers at Buffalo. Another event of show week in Buffalo, N. Y. was this gathering of Studebaker dealers as guests of the Meyer Motor Car Co.





Above: Nash-Ajax Dealers at Buffalo. The Nash Buffalo Corporation of Buffalo, N. Y., gave this dinner for dealers in Buffalo and surrounding territory. Charles W. Nash is at the speaker's table, seventh from the end nearest the reader.

Left: Velie dealers and factory men dined at the Hotel Commodore, New York, Jan. 13. Present were Edwin McEwen, president and general manager of the company, and Charles W. Hadden, general sales manager. Mr. Hadden is the third man in the back from the extreme left, and Mr. McEwen is standing, third from the extreme right.

TIME IN MOTOR LAND



MERRY making around the festive board always is a feature of automobile show time. Manufacturers and dealers take advantage of the opportunity to get together, to eat and to talk things over. Photographs on these pages show hundreds of dealers gathered at the banquet tables.



Above: Chicago Automobile Trade Association. The capacity of the Congress Hotel Gold room was taxed by this great rally of dealers on the evening of Jan. 28. After dinner tables were cleared out and more than 1600 men listened to addresses by C. F. Kettering, president of the General Motors Research Corporation, and Harry C. Spillman, merchandising director of the Remington Typewriter Co.



Right: Michigan Automotive Trade Association. More than 850 dealers attended this annual banquet held in Detroit Jan. 27. Governor Groesbeck of Michigan was the principal speaker.

New Accessories Picked Up at the *Chicago Show*

Several Old Line Companies and Some New Concerns Have Fitments of Interest to Automotive Dealers, Service Establishments and Others. Novelties of Former Days Give Way to Practical Things.

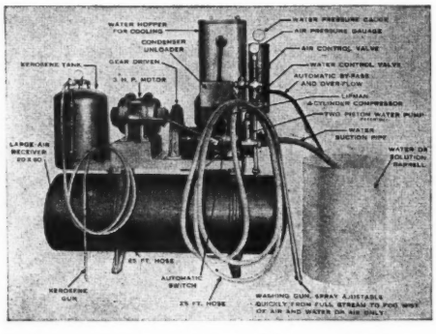
NATURALLY quite a few parts makers and accessory manufacturers who do not exhibit at the New York Automobile Show, present their wares for inspection at the Chicago Show. This year there were quite a number of manufacturers at the Chicago Show exhibiting accessories and shop equipment not previously displayed at any other show which has been held this season.

Among the new items we find eight articles of interest particularly to the dealer and shop operator. These items include tools for engine and other chassis work as well as apparatus for cleaning cars, towing purposes and general service station work encountered by the automotive man.

Lipman Spray Mist Washing and Cleaning Unit

The new Lipman spray mist car washing and cleaning unit will completely and thoroughly clean and renovate a car inside and out in from 15 to 30 min. at a moderate operating cost, it is stated. The inside of the car is first cleaned by a special air nozzle. The engine and all grease encrusted parts are cleaned with a special kerosene gun. Then a fine water spray—not water pressure—loosens the dirt on the chassis and body. A second bath with a heavier spray completely rinses off all dirt and grit without damage to the finish. Finally a special air gun removes all water residue, making it necessary only to rub a small amount of chamois.

Air and water are controlled by two leaders. Atomization of the water is accomplished by a specially constructed valve in the gun itself and in the hands of the operator at all times. This valve construction and gun design eliminates the necessity of two hose lines. The gun is swivel jointed making it possible to reach any part without kinking the hose.

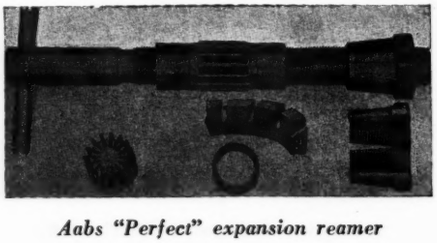


Lipman spray mist washing and cleaning unit

The mixing valve for the kerosene spray is on the tank containing the liquid. Air pressure is furnished by a Lipman four-cylinder compressor, gear driven by a 3 h.p. motor and provided with an automatic cutout and unloader. The machine is made by Lipman Pump Works, Rockford, Ill.

Aabs Perfect Expansion Reamer

One of the exclusive features claimed for the Aabs perfect expansion reamer made by New Ulm Co., Inc., New Ulm, Minn., is the automatic mechanical feed which insures steady even cutting. The blades are short, deep and are held in



Aabs "Perfect" expansion reamer

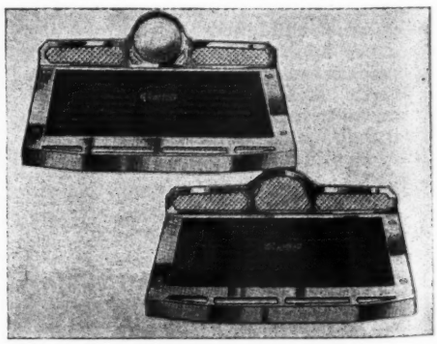
place by two slotted collars independent of the two case hardened lock nuts. The blades are all evenly spaced and no two are opposite. This is said to guarantee smooth cutting, though there may be oil grooves in the bushing. They have a self-centering cone for alignment. The body of the reamer is made of special heat treated nikrome steel. The reamers come in seven sizes ranging from 39/64 which expands to 43/64 and 17/32 which expands to 1⅜. The number of blades vary from eight to sixteen depending on the size of the reamer and prices range from $8.40 to $18.90. These reamers will cut .010 oversize.

Courtesy Step Plates

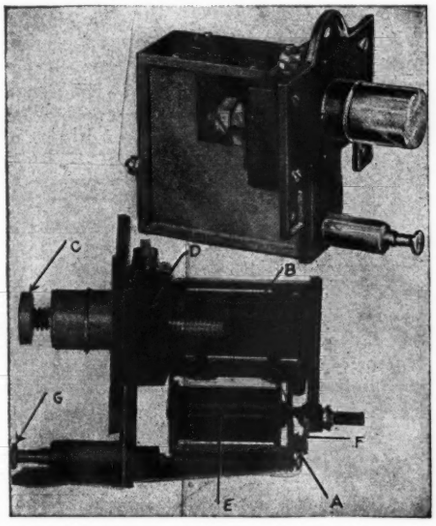
Two new models of Courtesy step plates have been added by Dunhameter Corporation, 230 E. Ohio Street, Chicago. Model No. 50 offers the advantage of side protection and running board illumination in one compact unit. The size overall is 9 13/16 in. by 9 in. Nickel plated brass bolts and the necessary wire for installation are furnished. The mats are jet black rubber. The list price of model 50 is $5.50.

Model No. 55 can be used as a companion to model 50 or for complete running board equipment without lights. Its size is 9 13/16 by 8¾ in. both plates are very rugged and will hold their high lustre, it is said, because of the use of an aluminum alloy known as Durabrite. This metal is not brittle, has an even texture, can be readily cast and takes a finish well.

The Dunhameter Corporation also has just placed on the market a new Dunhameter for Fords, listing at $5. It is furnished with a lock and is nickel plated.



Courtesy step plates



Anti-Stall, an automatic restarting device

Anti-Stall

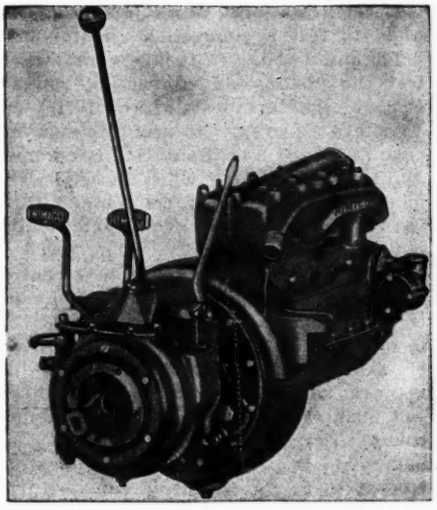
An automatic restarting device, electrically operated in conjunction with the ignition switch has been brought out by the Anti-Stall, Inc., 100 East 42nd Street, New York City, under the name Anti-Stall. When installed in the car the ordinary starting motor switch is removed or disconnected and proper connections made to the Anti-Stall device. Its purpose is to restart the engine automatically in case the latter "stalls" for any reason.

Anti-Stall is connected with the battery, starting motor, generator and ignition coil, thus becoming part of the electrical system. It has one magnet, one solenoid magnet, two springs and a relay switch. When the ignition switch or key is turned on the current from the battery flows across contact A into magnet B, drawing in the starting button C, thus sending current from the battery across starting switch D, into the starting motor which cranks the engine. When the engine begins to run current from the generator flows into the magnet E drawing back relay switch F and opening contact point A. When the engine stops for any reason except turning off the ignition switch, the generator stops. Magnet E then goes dead, relay switch F closes point A and sends current back into the magnet B. This revolves the starting motor which in turn restarts the engine.

Himico Power Plant for Ford Cars and Trucks

A heavy duty power plant interchangeable with the power plant in Ford cars and trucks and built especially to fill a need of road contractors, bus operators, taxicab owners, etc., is being made by the Hinkley Motors, Inc., Detroit, Mich. It drops into the Ford frame without any alterations and the complete power plant comprises the following items as standard equipment: Himico heavy duty engine, Himico sliding gear transmission, Himico clutch, transmission brake, gear shift lever, clutch and brake pedals universal joints and foot accelerator. The oil pan is removable from the crankcase without taking the engine from the frame.

Some of the outstanding features of this power plant are a crankshaft 2 in. in diameter, with drilled oil passages to all connecting rod and main bearings. Lubrication is full force feed by gear pump. Valve seats are water cooled and the engine is fitted with large inlet valves. The bell housing is integral with the cylinder block and removable shell, bronze backed main bearing halves are used. Piston pins are one inch in diameter. A five gear train is provided on the engine to permit use of a magneto and generator. Provision is also made to use a one inch carburetor, either vertical or horizontal outlet. The engine and transmission unit weigh 435 lbs.

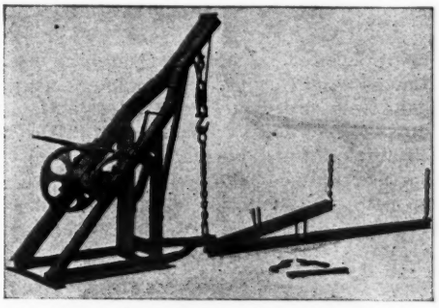


Himico heavy duty power plant for Fords

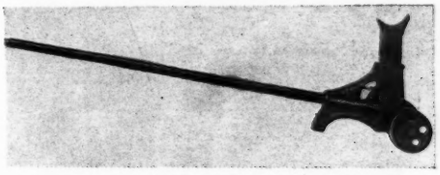
Perfection Duken Type Crane and Cradle

This is a crane and cradle designed for use on service cars and wrecking trucks and is built by the Naperville Machine Co., Inc., Naperville, Ill. Some of the features claimed for this equipment is that of strength and rigidity, riveted where strain is greatest, material a little heavier than necessary, winch and main gear cast in unit and a cable ½ in. in diameter. The material is heavy and the base dimension is 36 in. by 29 in. The height in top adjustment is 72 in., lowered 59 in. There is a triple or double pole through the sheave pulley and snatch block arrangement. The latter opens on the side enabling removal of the cable for a straight pull. The crane weighs 400 lbs. and lists at $95.

The cradle is 90 in. long and has ten adjustments for cars and trucks of various lengths. It prevents side sway and damage to the wrecked car by a sudden stop. It is locked to the wrench in one minute by use of specially designed hooks, and steel pins prevent the wreck from shifting. It can be used with any make of crane. Its price is $25.



Duken type crane and cradle



K. R. W. self adjusting quick service jack

K. R. W. Self Adjusting Quick Service Jack

The K. R. W. quick service jack made by K. R. Wilson Co., Buffalo, N. Y., has a center of gravity 4 inches back from the axle and 8 in. ahead of the floor leg. With two 5½ in. diameter by 1⅜ in. faced wheels, spaced 8¾ in. apart there is formed a tripod which cannot be easily tipped over. The handle is made of 1 in. steel pipe 55 in. long. The sliding head is mounted on a pull coil spring of light tension and is always up in position unless forced down by contact with the axle. There is an automatic adjustment for standard balloon tires, whether inflated or deflated. To operate the jack the handle is raised to a 45 deg. angle and the jack rolled under the axle. By pressing on the button in the end of the handle the ratchet is released which allows the sliding head to adjust itself to the correct height and then lock automatically. It is then only necessary to bear down on the handle.

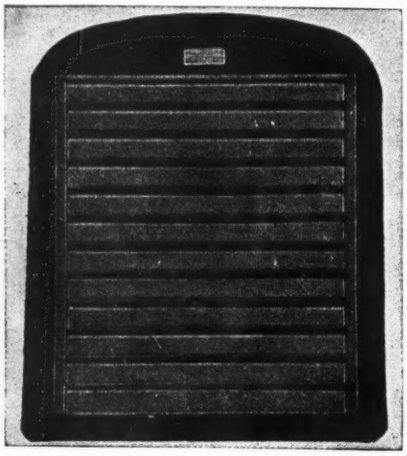
Hobart High Rate Discharge Set

Hobart Brothers, Troy, Ohio, has just placed on the market a new high rate discharge set equipped with three voltmeters which make it possible to take the readings of three cells of a storage battery at the same time. The outfit is very compact and portable. Detachable wires is another feature. In addition to the voltmeters there is an ammeter on the instrument as well as a handle to increase or decrease the ampere drag on the battery. The discharge set sells for $48.

New Automotive Products Shown at Chicago – Continued

Weather King Radiator Shield

The Weather King radiator shield, manufactured by Metal Stamping Co., Long Island City, N. Y., is made of heavy gage cold rolled steel and is attractively finished in black enamel. All rattle is eliminated by a special combination of springs and bearings and the heavy brass operating cable is enclosed in armor to avoid the possibility of any chafing or

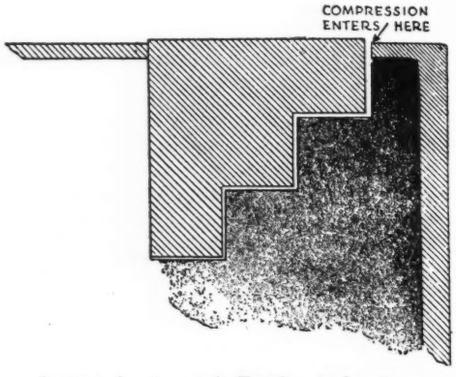


Weather King radiator shield

wearing through. The shield is easily installed with four bolts through the radiator core and a simple dash control operates both the upper and lower halves, independently. One of the features of this shield is the fact that each half can be operated independently. Prices range from $7.75 to $15 in the ordinary finish, while in nickel silver each model is $50.

Triple Seal Piston Ring

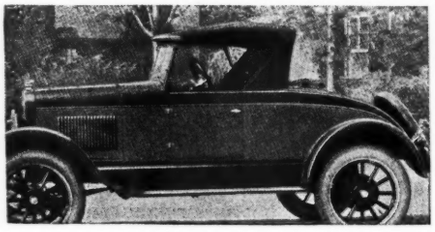
The, feature of a Triple Seal piston ring made by the Triple Seal Piston Ring Co., 4246 Sheridan Road, Chicago, is the low wall pressure. For example, the Triple Seal ring for the Ford engine has a wall pressure of only two pounds. As shown by the cross sectional drawing the ring is made with three concentric steps and naturally the grooves in the piston must be cut to conform to these steps. One of the theories put forth in favor of this ring is that compression leaks back of the ring push the latter out against the cylinder wall and down against its bottom seat making a perfect seal.



Sectional view of Triple seal piston ring

Rex Fabric Body for Fords

A new sport roadster type of body for Fords has been brought out by the Rex Mfg. Co., Connersville, Ind. The body is 6 in. lower than the standard Ford body and the frame-work is built of wood over which is built a fibre board and strip metal wall covered with heavy duck and padding, after which the exterior finish is applied. The latter is a leather fabric and can be had in a choice of colors. Ordinarily the outside fabric is applied in a two-color combination. Nickel plated handles are fitted to the body doors and the hood is finished to match the body colors. The back and seat cushions are upholstered in leather cloth over deep springs and are removable. A one-piece windshield, lowered steering column and one-man top with natural wood bows add to the attractiveness. The body is designed to use the fenders, running boards and other parts as furnished regularly with the latest Ford model runabout. The body can be installed on any Ford chassis of 1921 to 1926 inclusive and the price is $198 f.o.b.



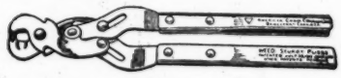
The Rex "Collegian" fabric body for Fords

Aabs Sureway Piston Lining Machine

This machine made by New Ulm Mfg. Co., Inc., New Ulm, Minn., makes it possible to test a connecting rod for both bend and twist. It is also possible to test the piston and connecting rod assembly. The mandrels and centering devices are all ground to accurate size and case hardened and the device is clamped in an ordinary vise when in use. The model A is machined complete with a reaming attachment and straightening tool and master mandrel. The price is $59. Model B is the same as model A excepting that the reaming attachment is not included. The price of model B is $47. The reaming attachment consists of a connecting rod clamp, centering mandrel with five cones and three double end bushings to fit different size reamer cones. The net price of the reaming attachment is $15. Semi-steel casting sleeves to fit the mandrels can be furnished in sizes from 1¼ in. to 2½. The prices of the mandrels are from $2 to $2.90.

Weed Sturdy Pliers

A new type of heavy, durable, drop forged chain pliers for garages, service stations and taxicab service where there is quite a bit of tire chain repair work, has recently been added by the American

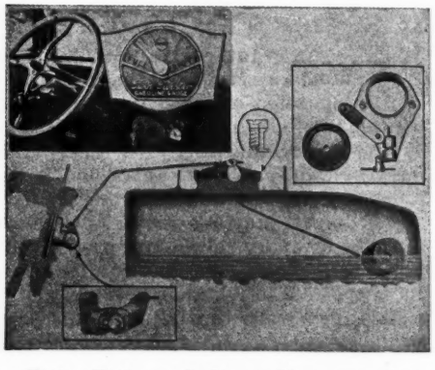


Weed sturdy pliers for cross chains

Chain Co., Bridgeport, Conn., makers of Weed tire chains and other products. The pliers have a cantilever action and are equipped with a cutter on each side. The price is $3.

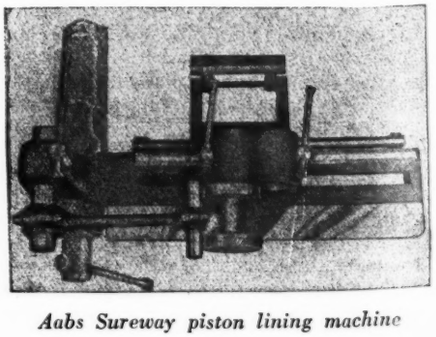
Twin Twister Dash Gasoline Gage

The Twin Twister dash gasoline gage is a mechanically operated fuel height indicating device for the new model

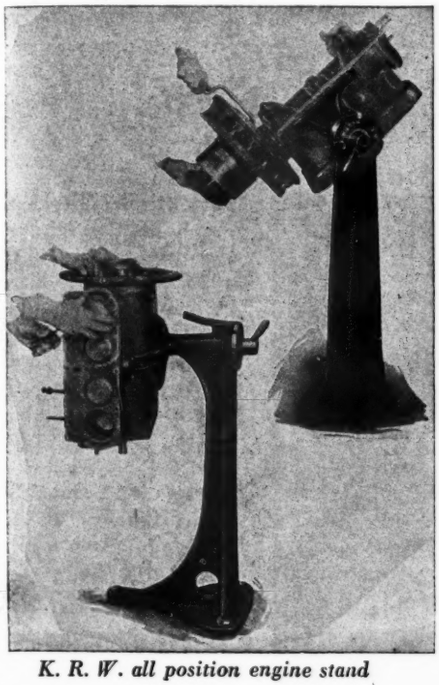


Twin Twister dash gasoline gage for Fords

Fords. A special tank cap replaces the regular one providing an opening large enough for any gasoline hose nozzle. The cap is held down by a spring, making it tight. Bevel gears make a direct connection between the indicator on the instrument board and the float in the fuel tank insuring a positive operation. The installation requires only a few minutes and necessitates boring two small holes on the instrument board. A neat and attractive nickel plated dial fits on either the right or left side of the switch plate assembly and the red indicator hand of this dial is connected to the cork float in the tank by means of one reach rod and simple die cast gears. The list price is $2.50. It is made by Woodhead Twin Twister Co., Brainerd, Minn.



Aabs Sureway piston lining machine



K. R. W. all position engine stand

K. R. W. All Position Engine Stand

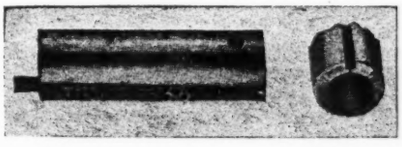
A simple design of stand to handle the Ford engine has been brought out by K. R. Wilson Co., Buffalo, N. Y. The engine can be completely assembled or dissembled including the crankcase, in this stand. The valve side is unobstructed and the mechanic can work from all sides without inconvenience. The engine is balanced in all positions. The pedestal is designed to take up very little room and properly braced. The turrett locking lever is always on top, easy to reach and with the engine in any position. A friction locking lever takes out all lost motion and holds the engine rigid. The engine bracket is of malleable iron and has a shaft 1½ in. in diameter. All bearing surfaces are machined.

Imperial Wheel Marker

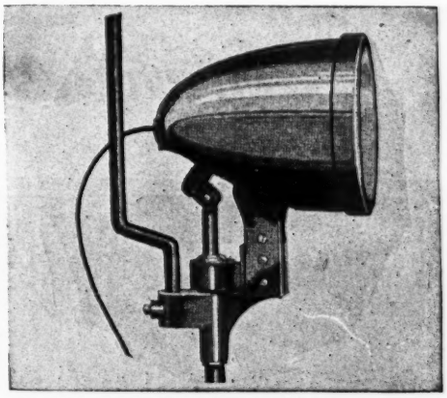
A rather simple device which requires but a second to slip on the steering wheel and which at all times informs the driver as to the direction in which the front wheels of his car point is made by the Imperial Brass Mfg. Co., 1200 W. Harrison St., Chicago. It is made of solid silver bronze and will not tarnish and snaps to the steering wheel. It is said that it will not tear gloves and the hands slide over it easily. The price is 25 cts.



Imperial wheel marker



Aabs expansion piston pin



Walden Fore-Lite

Walden Fore-Lite

The Walden Company, Chicago, which has been making the Walden Fore-Lite for some time has recently placed on the market a new model which, while it has all the inherent features of the Walden Fore-Lite is equipped with a torpedo shaped lamp instead of the drum type lamp.

Aabs Expansion Piston Pin

The Aabs expansion piston pin made by New Ulm Mfg. Co., Inc., New Ulm, Minn., is made with a wedge shaped opening and fitted with a wedge shaped piece whereby adjustment can be made to any size desired within the limits of the pin. The pins are made from solid bar steel, heat treated and scleroscope tested. The pins range in size from ⅝ in. in diameter to 1½ in. and in lengths from 2½ to 5 in. List prices are $1 to $3.50 per pin.

Delivery Truck Show Held at Chicago

SPONSORED by the hotel management, a delivery truck show was opened February 1st, at the Hotel Sherman, Chicago, to run concurrently with the automobile show. This occasion was taken advantage of by two manufacturers to introduce new products, one being the novel Pac-Age-Kar, and the other a speed truck added to the Diamond-T line.

The Pac-Age-Kar, which was designed solely as a delivery vehicle for operation under conditions demanding frequent stops and quick getaway, is laid out on extremely unorthodox lines. The unit engine and gearset, are located at the rear end of the chassis, and the drive is taken to each rear wheel by a separate shaft and worm gear.

Designed to carry a 2,000 pound load, the body capacity is 216 cu. ft., measuring 6 ft. high inside. The overall height however has been kept down to 7 ft. 3 in., while the wheelbase is but 95 in. With the 10 h p. engine, gasoline and oil consumptions are guaranteed at 40 m. p. g. and 800 m. p. g. respectively. A two-speed forward and one reverse is incorporated, the normal operating speed being 15 m. p. h. Lacquered any color, the complete vehicle sells for $850.

In staging the new model 76 fast 1-tonner, Diamond-T have not only made a strong bid for light delivery business but they have put into practice their new policy of designing a truck that is as pleasing to the eye as a private car.

Another model shown was the T4, a 1½-2-ton job, which has been on the market about a month. This had a low-sided body and a 3-man totally-enclosed cab.

The third exhibit was a de-luxe delivery vehicle, part of an order for Marshall Field's. This was mounted with a $2,000 panel body with enclosed driving compartment having half-doors. A special box tire compartment and a rear bumper were notable features. Tires were 34 x 7.30 balloons. All these vehicles are fitted with the HW Filtrator as standard, but starters are optional.

Other delivery jobs shown were, Yellow-Knight 1-tonner, a Commerce super-7 open-side truck and a metal panel job, Ford screen and panel models, International 2,000 lb. side-entrance milk truck and panel vehicles, the Stewart Buddy, and a LeMoon 1-tonner. The latter company also staged the Milburn electric, which they manufacture. The Hendrickson company was represented by a 3-ton chassis, and American LaFrance by a model 2R 2½-ton chassis.

The Walker vehicle company exhibited one of their electric truck axles, with glass discs on the wheels so that the operation of the floating wheel drive could be observed.

In the body section the Highland Body Mgf. Co. showed a high grade panel body on trestles, and the Erlinder Auto Body Co. staged a bullet-proof body for bank cars.

Prize Winning Windows

In the A. E. A. Christmas Contest



First Prize. The photograph at the left was awarded first prize in the 1925 contest conducted by the Automotive Equipment Association for the best Christmas window built around the idea of "Sell Something for the Car this Christmas." This window is that of the Vernon Garage, Vernon, B. C., Canada. It won a prize of $150.

Third Prize. Fletcher & James, of Portland, Ore., decorated the window, shown below, which won third place in the A. E. A. contest. This prize won $75.



Second Prize. Upper left: This window, decorated by the Boller Auto Co., of Grand Junction, Colo., was awarded second prize of $100 in the A. E. A. Contest.

Fourth Prize. Lower left: This Christmas window brought $50 in cash to Bowersock Motor Co., of Clinton, Okla.

Fifth prize. Lower right: The A. E. Bowering Motor Co., of Mitchell, South Dakota, won a cash prize of $25 with this attractive window.

The READERS' CLEARING HOUSE

Questions and Answers on Dealers' Problems

BUILDING ▲ ELECTRICAL ▲ FLAT RATES
SHOP ▲ LEGAL ▲ PAINT & TRIM ▲ ACCOUNTING

Can Supercharger Bring Back Two Cycle Engine?

Q.—I would like some information about the old Elmore two cycle engine. Give the exact location and design of both the intake and exhaust ports. Also illustrate the top of the piston. I believe the Elmore pistons were made with baffle plates projecting upward, thus deflecting the incoming charge toward the upper part of the cylinder and facilitating scavenging. Does this engine present a cooling problem? If so, please give the solution. What was the maximum r.p.m. of the Elmore four cylinder engine? What is the greatest objection to the two cycle engine as applied to automobiles?—E. L. Kerfoot, Hutchinson, Kansas.

We are showing a sectional view of one of the last Elmore engines built. The early Elmore engine used crankcase compression where the fuel mixture was drawn into the crankcase and compressed by the downward motion of the piston. In the lower position of the piston the exhaust port was uncovered to permit the exhaust gas to go out and at the same time another port was uncovered which completed a connection from the crankcase to the combustion chamber, so that a new charge of fuel would be fed to that particular cylinder.

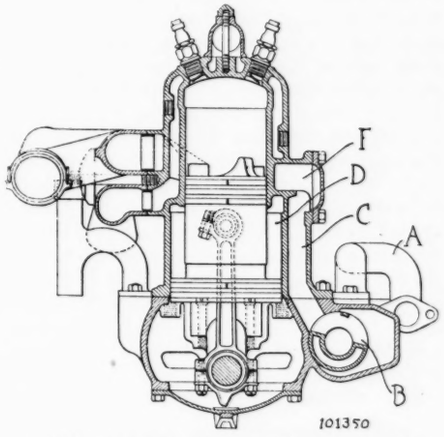
How It Works

In the illustration given a different principle is used and the piston has two diameters, the enlarged portion at the bottom serving to draw the fuel from the carburetor and feed it to the combustion chamber. In this construction the crankcase is not used as a reservoir for the gas. In this engine there is a rotary valve B which is mounted on ball bearings and in the position shown is feeding fuel from the inlet manifold A to the annular chamber D. The exact way in which the valve operates is not shown in this diagram, but as it rotates and as the piston moves upward the compression in the space D is used to send fuel through the rotary valve B to a cylinder which is ready to compress a new charge of fuel. In this construction each cylinder is not a complete power unit in itself, but depends on some other cylinder.

The Elmore engine with crankcase compression would run either backward or forward so that in climbing a hill if the engine stalled it would suddenly start up in the reverse direction and run the car backward down the hill. With the newer type and with each cylinder depending on some other cylinder for its charge of fuel the action is not reversible.

One difficulty with this type of engine is in getting adequate compression, as only a small portion of the stroke is available for sending a charge of fuel into the combustion chamber. Another difficulty is that the cylinder is not thoroughly cleaned out at the end of the stroke, for while the exhaust gas rushes out there is still a considerable volume of dead gas in the combustion chamber. Another difficulty is that the incoming gas in spite of the deflector on top of the piston, tends to go out the exhaust port to some extent.

The engine is also somewhat difficult to carburate for if the mixture is correct at one load, it may not be correct at some other load. Changes in speed are also difficult to get and engines of this type have had their speed controlled by advancing or retarding the spark rather than by controlling the throttle. This type of engine while theoretically advantageous on account of having a power stroke at every revolution for each cylinder, has never been developed to a high state of perfection for use in automobiles. With the advent of the supercharger talk has again turned to the possibility of using two cycle engines, but as far as we know there has been no constructive engineering in this direction.



Sectional view of old Elmore engine

Q.—Can a four lead ignition distributer be satisfactorily hooked up to a four cylinder, two cycle engine?

Any battery ignition system having a four lobe cam could be used. The only difference would be that it would be driven at engine speed instead of at one-half engine speed as all four cylinders would fire at each revolution of the crankshaft.

Gross of Plugs Would Not Repair the Cylinders

Q—I have in my possession a 1923 Chandler which has been giving a great deal of trouble. I will put in six new spark plugs and in a few days time in warming up the engine, the third and fourth cylinder will drop out. The plugs short up in the porcelain. Have tried different plugs and put on a new coil, but the same thing happens every time. Would like to see a reply in MOTOR AGE as I am a subscriber and read each issue carefully.—Frank Holdren, Good Hope, Ohio.

The engine in question apparently needs to have new piston rings and possibly new pistons. If it has not had rings within the last 10,000 miles, this is probably the answer. You might write to a number of the piston ring concerns which advertise in MOTOR AGE and ask for their circulars as they give methods of draining oil by drilling holes in the lower ring groove. The exact way that the holes are drilled will vary with the type of piston ring used. It is useless to try putting new plugs in for you are not touching the cause of the trouble.

When tearing the engine down it might also be advisable to measure the bore of the engine and see if regrinding is necessary. If the cylinder bores are eccentric, that is more than .002 or .003 larger in one section than another, or if they are appreciably tapered they should be put in condition and new pistons installed.

ENGINE OIL LEAKS OUT AT REAR WHEELS

Q.—What causes the Ford engine to leak oil from the transmission back through the drive shaft tubing to the differential throwing out oil around the rear wheels?—W. L. Hartwell, Coal Valley Motor Co., Montgomery, W. Va.

We believe that this is due to excessive wear in the rear bearing of the transmission or in the part known as universal ball cap part No. 3369. It is also possible that the felt washers need to be replaced in the rear wheels. In doing this it is sometimes helpful to put one in before the bearing is put into the axle housing.

CLOSED BODY WANTED FOR SAXON

Q.—I have two Saxon six chassis, one 1917 and the other 1918 and I want to put closed bodies on either one or both. If any of the MOTOR AGE readers know of a standard closed body of some other make, that is either a coach, brougham, sedan or coupe that would fit on this chassis without much trouble, I would appreciate hearing from them.—F. J. McCullough, 1122 N. Wilson Way, Stockton, Calif.

Any MOTOR AGE reader knowing of a standard body that will fit on the Saxon six chassis will earn the gratitude of Mr. McCullough and of MOTOR AGE by getting in touch with him.

The READERS CLEARING HOUSE — Answers to Readers' Questions

Adjustment of Oldsmobile Truck Axle

Q.—Please show cutaway of Oldsmobile truck rear axle? Also advise how to make gears mesh closer. Edward Ehrecke, Montpelier, Iowa.

A diagram of the axle is shown in accordance with your request. At either side of the differential will be found adjusters "A" which hold the differential and jack shaft bearings in the proper relation and which also are used to adjust the bevel pinion and ring gear so that they will mesh properly. These adjusters should not be brought up so tight that they cramp the bearings. By turning one to the right and the other to the left, it is possible to change the center distances of the ring gear and pinion. When the axle leaves the factory, this adjustment is made in such a way that there is a slight amount of back lash and the engagement corresponds with the pitch line of the gears.

Adjustment of Bearing and Hubs

If the hubs are removed for the purpose of lubricating or examining the brakes, it will be necessary to remove the outer bearing. The truck driver therefore, should be competent to replace these bearings. This adjustment is very simple.

First: Screw up the nut "B" until it is tight. Rotate the wheel a few times by hand, then draw the nut "B" up tight again, back it off one-half turn to obtain freedom of rotation.

Second: Slip on the perforated washer "C" and see that the projecting rivet or pin in nut "B" fits into one of the corresponding holes in the washer "C."

Third: Screw up the castellated nut "D" until it is tight, and secure nut with cotter pin.

Taking Down the Axle

To disassemble the axle, first remove the hub cap "E." Remove the cotter pin and unscrew the castellated nut "D." The perforated tongued washer can then be removed and the round nut "B" unscrewed. The wheel can now be pulled straight off the hub spindle.

The internal gear, which is riveted to the hub can then be inspected. If it is desired to take down the differential carrier, the first step is to pull out the jack shaft to which the spur pinion is keyed. This is done by removing the flange "G" which is held in place by two bolts. The jack shaft can then be pulled out by hand. After both jack shafts "H" are removed in this manner, the differential can be taken out of its housing, by removing the rear half of the differential carrier "J," which is held in place by six nuts and studs. Removal of the differential makes it possible to examine the driving pinion "K" and shaft "L." The driving pinion and shaft can be removed by unscrewing locknut "M," taking the shaft through the rear of the carrier.

The construction of the axle is such that any other parts can be handled without any special instruction.

To assemble the axle again, special attention must be given to obtain proper adjustment of the bearings and differential gears. These adjustments should be made by a mechanic familiar with such work. The adjustments of the taper roller bearing on drive shaft "L" is made by setting up inner nut "M" moderately tight, and then turning it back one-fourth to one-half turn, which will permit of a barely perceptible play or shake in the bearings. Then draw up the outer jam nut "M" very securely and lock both nuts in place by bending over the prongs of the washer "N." One of these prongs should be bent flat against the side of each nut. The taper roller bearings on each side of the differential are adjusted in similar manner and **must be** given a small amount of play. These adjusters are locked in place by piece "O" which fits into a notch on the bearing adjuster "A." The pinion felt retainer "P" which is located at the front end of the differential carrier, is locked in place by a set screw which must be removed before the retainer can be unscrewed. If the axle is taken down, care must be exercised to see that these locking devices are secured, as otherwise serious damage may occur.

REPLACE THE BIG GEAR, TOO

Q.—We have a 1918 Dodge Brothers car that has a whine in the reverse, low and second, but runs all right in high. We have replaced the countershaft and the gear cluster which runs on the countershaft and also the high speed sliding gear. The other gears were in good shape. We are wondering if the trouble could be in a bent sliding gear shaft or a bent clutch shaft. Mosier Garage, Mosier, Ore.

You do not mention replacing the large gear on the countershaft which meshes with the high speed gear. While this very rarely requires replacing it may be that it does on a car as old as this. It is also possible that the plain bearings in which the countershaft turns are worn sufficiently so that the gears do not mesh properly.

Way Job Is Done Will Make a Difference

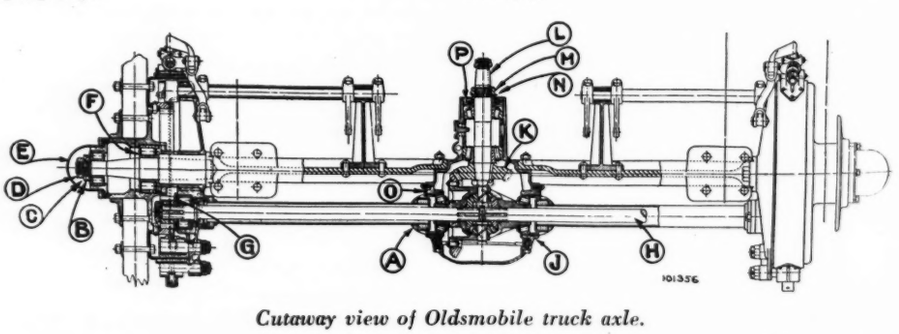
Q.—Is there any way to stop oil pumping on a Dodge? We have installed oversize pistons and done a variety of different things, on a number of different Dodges, but never succeeded in stopping any of them from pumping oil.—H. L.

We do not believe there is any particular difficulty in stopping oil pumping on a Dodge or practically any other car. You do not say whether you checked the cylinders to see whether they were out of round or tapered. You also do not state whether you used any special kind of piston ring in the lower ring groove or whether you used a special construction to permit the oil to drain back into the crankcase. Wish you would let us know and preferably send a sketch showing how you take care of the lower ring groove. Also let us know whether you have checked the cylinders for circularity. It is also possible that the oil pipe which runs the length of the crankcase is turned the wrong way so that the oil holes permit the oil to strike the connecting rod. The pipe should be turned so that the holes are down so that oil will go into the troughs.

ALCOHOL IN THE CRANKCASE

Q.—Here is a suggestion that may help someone. I have found that adding a pint or more of alcohol to the oil in the crankcase keeps the water from freezing in the oil pump. This water collects from frost or condensation in the engine and the alcohol keeps it from clogging up the screen in the oil pump. —Edwin R. Hillstrom, Pettibone, N. D.

Some authorities on lubrication claim that alcohol used in this way will either contain acid or will release free acid in the oil by chemical combination. It is also indicated that this acid might be detrimental to the finished surfaces of the crankshaft and other parts. However, where there is danger of the oil failing to circulate on account of condensation freezing it would appear to be the lesser of two evils to use alcohol. On the other hand frequent changing of the oil would also reduce the likelihood of enough moisture forming to cause any trouble.



Cutaway view of Oldsmobile truck axle.

Planning Your New Building

By TOM WILDER

The READERS CLEARING HOUSE

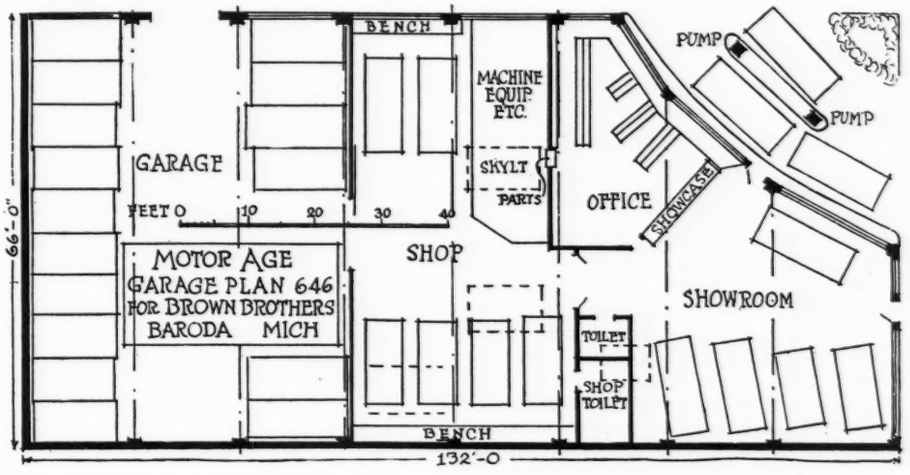
Ford Sales and Service With Small Filling Station

Q.—We are interested in building a new Ford sales and service station. We have a corner lot 66 by 132 ft. We want a drive-in filling station and also a good size stock and showroom. About a year ago there was a plan in MOTOR AGE of a building for a Ford dealer some place in Illinois which was just about what we want. Our town is about 400 population, but is very thickly settled. We wold like to cover the whole lot.—Brown Brothers, Baroda, Mich.

We have been unable to find anything in our files which would fit the shape of your lot and so have been obliged to make you a special plan.

We do not as a rule like a corner filling station, because it cuts up the showroom and office into too many triangular areas that are hard to handle. In this case it has worked out pretty well, however, and you will be able to stand three cars at the pumps without obstructing the sidewalk. You will note that the pumps are not placed evenly in the center of the space but at one side so that rear tank cars may stop without interfering with pedestrians.

If more repair shop space is needed the shop may be extended toward the rear using the space occupied by the forward row of cars in storage. There is space in the shop between the rows of cars in repair to give quick service and adjustment such as battery and tire service.



In this plan the shop is entered from the garage and is handy to the stock room. Being partitioned and adjoining the showroom it will be cozy and warm for winter overhauling service and require a minimum of fuel.

Legal Questions Answered

By WELLINGTON GUSTIN

RECOVERY OF DEPOSIT DIFFICULT

Q.—On the 5th of March, 1920, I entered into an agreement with the Franklin-Williams Company to sell cars. Together with other things it was necessary for me to put up a $300 cash deposit. The contract called for three cars, but owing to the business condition which arose in 1920 I was able to sell but two. At the termination of my contract with them August 31, 1920, I wrote them terminating my contract and asked for the return of the deposit or at least that part which was coming to me. I received no reply and thinking that the law was against me in the collection of this money, I let the matter drop. However, seeing the article covering such a question as mine I would like your advice as to whether or not it is possible to collect all or part of this deposit. I am enclosing agreement for your inspection, which kindly return. Also for your advice I wish to say that I owed the company nothing, that they were put to no expense other than sending up a demonstrator to make this agreement, and giving me possibly $15 worth of general advertising literature.—D. A. McMullin, Modern Service Station, Highland, Kansas.

For a Specific Purpose

While a deposit is held in trust as a matter of law, this deposit is made for a specific purpose. Whether this deposit may be recovered depends upon the terms under which it was made and whether the depositor has performed according to these terms. Now, referring to your agency contract submitted, I find that there is a rider covering the purchase of three cars. This provision covering the deposit, says such deposit shall be held as a guarantee to the distributor that the dealer will take the cars agreed upon; and that upon failure of the dealer to take any motor car and pay the full purchase price thereon on the date specified for delivery or shipment then said deposit shall be forfeited to the distributor and be retained by it as liquidated damages for such failure.

You state that you were not able to take one of the cars. Then you broke your engagement to purchase the number agreed upon and this guarantee provision was invoked by the distributor, who refused to return your deposit.

Had you taken the cars agreed upon then you could have recovered the deposit. Or had the distributor been at fault in terminating the contract you could have recovered the deposit.

Where a deposit on a contract covers only actual damages or approximate damages, hard to arrive at, known as unliquidated damages, such deposits can rarely be recovered in part even where the depositor has breached the contract causing such damages to the other part to the contract.

The courts do not favor penalties and if a deposit amounts to a penalty against the depositor upon his failure to perform according to the terms of his contract, the deposit or so much as is equitable, may be recovered by the depositor. But where damages are unliquidated the parties may approximate the probable damages upon breach of an obligation, and unless the actual damages are clearly excessive and unconscionable, the courts will not interfere with the agreement naming a specific sum as liquidated damages for a breach of contract.

Against Penalties

For instance, should the dealer deposit one thousand dollars to guarantee the performance of a contract, and should his failure to perform result in only a nominal loss to the distributor which could be easily arrived at and shown to the satisfaction of a court, although they had agreed to call this damage unliquidated and had further agreed in advance, to a fixed sum in liquidation of same, as liquidated damage, then the court could say such a forfeiture of one thousand dollars was a penalty and would order the return of the deposit or a proportionate amount.

Thus, it is that often a deposit is recoverable where the depositor assumes that the law is against him, even though it is so written in his agreement. The construction and interpretation of a contract often requires an expert in the law.

The READERS CLEARING HOUSE — Answers to Readers' Questions

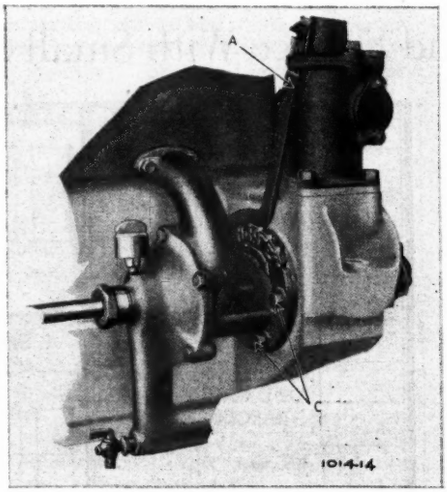
Adjusting Hudson Timing Chain

Q.—Can you give me the exact procedure to follow when adjusting the valve tappets on a model 59 Cadillac engine?—Fred J. Roth, 746 N. Bowman St., Mansfield, Ohio.

In the May 21, 1925, issue of MOTOR AGE this information was given for the model 61 and we understand that the procedure on the 59 is just the same.

Q.—Can the front end chain on a 1924 Hudson be taken up by an outside adjustment and if so, how?

We are showing an illustration which should explain the outside adjustment of the Hudson timing chain. To see if the chain is loose grab the coupling between the generator and water pump and turn it to and fro as far as possible. There should be approximately ⅛ of an inch movement on the circumference. If more movement is visible, then the chain needs adjusting. To do this remove the three bolts marked C (two of these show in the illustration while one is hidden). Then by means of special wrench A, pull flange in the direction of the arrow until only the necessary play is present. If it is necessary to shift the flange slightly to get the bolts to line up, back off the adjustment instead of turning up tighter or you will overload the bearings.



The right wrench makes the chain job easy

MANIFOLDS, FAT AND THIN

Q.—Have a Ford car with a standard intake manifold which is about ⅞ inch inside diameter. If a large manifold, say one having an inside diameter of 1½ inches were used what would be the advantage or disadvantage? Also what would be the effect of reducing the size to ½ inch inside diameter and what would be the difference if a short manifold were used with the carburetor only 4 inches from the intake port as compared with the present standard manifold? Most new automobile engines for 1925 are installing shorter intake manifolds of smaller diameter. Please explain why. Walter Bliffert, 1945 14th Street, Milwaukee, Wis.

In general it is customary to use a large manifold on racing cars where it is necessary to get a large volume of fuel into the cylinders. On the other hand where such a car is operated at low speed, the velocity through the manifold is so low that it is difficult to properly vaporize the fuel. For example if too large a manifold is used it is very difficult to start the engine. For this reason the smaller the manifold the greater the gas velocity and the easier it is to get started. On the other hand if the manifold is made too small it is not possible to get enough fuel into the cylinder when maximum power is required.

For this reason unless the car is being built over for some special purpose it is best to leave the manifold alone for the designer of the car has figured out the best compromise for all around service. The reason for shortening a manifold is to reduce the opportunity for the gasoline vapor to condense on its way from the carburetor to the cylinder. This tendency to condense is overcome on many cars by the use of a hot spot manifold which supplies the necessary heat to keep the fuel in the form of a vapor. In your particular case we would recommend no change unless you wish to install a hot spot manifold.

OVERHEAD VALVES GET TOO MUCH OIL

Q.—Is there any way that the amount of oil to the valve action can be regulated on a 1924 Master six Buick. The engine delivers oil to the valves in such quantity that it runs out under the cover and wastes considerable oil.—F. J. Sharp, 20 Annabelle Ave., Trenton, N. J.

We understand that excessive oil flow from the valve mechanism on a Buick is due to wear in the bushings or shaft. We also understand that there is an escape hole in each rocker arm which permits the oil coming to the bearings to get out again. This oil then falls on top of the cylinder head and flows through a drain back to the crankcase. One remedy is to replace the shaft and bushings so that the oil does not flow so rapidly. Another suggested method is to plug the oil holes which allow the escape of oil from the rocker arm bushings. We believe if you study the flow of oil with the valve cover off that you will be able to figure out the best remedy to employ.

ADJUSTMENT OF SCHEBLER

Q—Please give adjustments of the Model S Schebler carburetor.

This information was given on page 24 of the September 24, 1925, issue of MOTOR AGE which gives adjustment of the Schebler carbureter as used on a Reo. We believe this information will enable you to get satisfactory operation from the car on which you are working.

Three Possible Ways of Repairing This Clutch

Q.—We have a Reo 1¼ ton truck bought in the spring of 1925. Today in taking this truck out of the garage to deliver some batteries I noticed that there was a sort of sound in the clutch as though the clutch were slipping. This sound would only show when the engine was going a little fast and the clutch would be let in. In this due to the weather being cold or do you think the plates will have to be cleaned.—Kentucky Subscriber.

This is probably a condition of the lining on the clutch plates which is aggravated by the cold weather. If the plates are glazed it is sometimes possible to effect a temporary remedy by washing out the clutch with kerosene. If this does not work then the clutch should be removed and the surface of the friction disks cleaned with kerosene and washed thoroughly with a brush to roughen up the surface. The most effective remedy, of course, is to remove the plates and install new ones when the lining has begun to show signs of poor operation.

Method of Figuring the Engine R.P.M.

Q.—In the October issue of MOTOR AGE in the Clearing House Department there was given this formula:

$$R.P.M. = \frac{336 \times S \times G}{D}$$

The notation was also made that if the problem was not fully understood additional information would be furnished. I do not thoroughly understand this formula and will appreciate your giving me any additional information that you may have.—Louis Wanner, 251 Main St., Garfield, N. J.

This formula gives the speed of the engine. Take for example the first car in the specification table in any issue of MOTOR AGE. In the February 4th issue the first car is Ajax. Suppose we want to find the engine speed at 20 miles per hour. Then S equals 20. The gear ratio is 4.77, therefore G equals 4.77. The wheel size is 30 by 4.75 so that D equals 30. We multiply 336 times S or 336 times 20 which gives 6,720. We then multiply this answer by G which is 4.77 which gives us 32,054.4. We then have to divide this number by 30 which gives us 1,068.48, so that the engine speed is 1,068.48 r.p.m. when the car is travelling 20 miles per hour, assuming no slipping of the rear wheels.

Q.—Give the formula for obtaining the piston displacement in cubic inches when the bore and stroke are known.

Displacement = $.7854\ D^2SN$. In this formula the letter D stands for the diameter of the cylinder. The letter S stands for stroke in inches while the letter N stands for the number of cylinders. The figure over D means that the diameter of the cylinder is multiplied by itself and then by S, N and the decimal .7854.

Clearing Up Electrical Trouble

EDITED BY A. H. PACKER

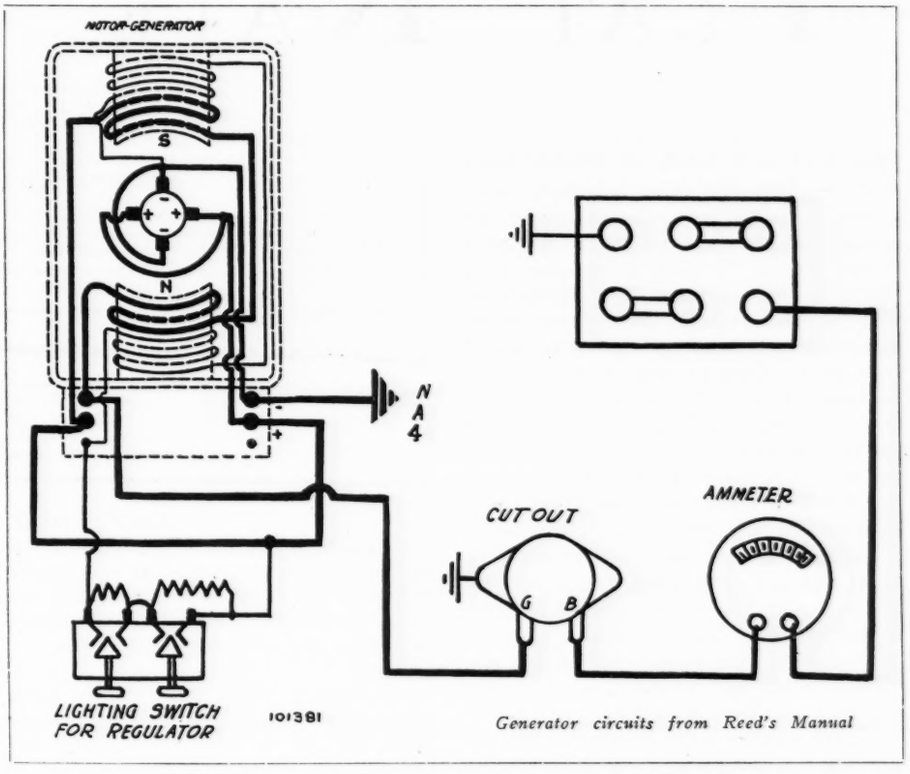
The READERS CLEARING HOUSE

Putting a 1912 Generator to Work

Q.—We have an 18-volt, 4 brush generator which was taken from a 1912 White. This generator has 5 posts which are marked as shown in the sketch enclosed with this letter. Can this generator be used to charge a 12-volt battery? Show how the connections should be made.—F. I. McConnaughey, Venetia, Pa.

We are showing a wiring diagram which is suitable for using this generator to charge a 6 volt battery. The only difference in charging a 12 volt battery would be that you would use a 12 volt cutout instead of a 6 volt cutout. Where the ground symbols are shown a wire should be connected back to the frame of the motor generator. The lighting switch should be connected as shown to hold down the current.

If both buttons are in the On position the resistances on the back will be shorted out and the maximum charging current will be obtained. On the other hand if the buttons are turned to the Off position then more or less resistance is put in the circuit. With one resistance coil made twice as long as the other you have four different resistance values possible, and consequently four different ranges for the charging current. Either iron or German silver wire may be used for the resistances.



Generator circuits from Reed's Manual

Making battery charger out of generator from 1912 White

EFFECT OF GAP SETTING ON HIGH SPEED

Q—Some time ago I saw in Motor Age information giving the distance to set all interrupter points on all electrical systems, but cannot locate it now.—William C. Allen, 425 Grand Street, Galion, Ohio.

Most ignition systems are set about alike, the point opening ranging from .018 to .025 in. The low figure would be about right for Delco and the higher figure for Remy and Connecticut. Westinghouse type SC ignition might be set about .010 to .012. One exception is the Atwater-Kent type CC ignition which due to the small size cam requires a smaller gap. This being from .005 to .007 in. On nearly all ignition systems a great variation in the interrupter opening will also affect the timing of the spark so if you are in doubt on any setting it would be well to check up the timing to make sure the engine does not kick back when starting. Too small a gap will usually cause missing at low speed while too large a gap will cause missing at high speed.

WHAT C. P. CHARGER TO BUY?

Q.—We are contemplating the purchase of a constant potential machine and we are considering three, the names of which are enclosed. Wish you would recommend one of these three?—D. C. Slick, The East Granite City Garage, 2625 Lincoln Street, Granite City, Ill.

It is contrary to the policy of Motor Age to recommend or condemn any particular item of equipment, but we wish to say that any well known constant potential device will doubtless give satisfaction. In the different machines there may be some variation in the method of regulation and some may hold the voltage more constant than others. However, in any method of charging, it is desirable to keep watch on the batteries and see that none of them overheats which necessitates supervision even with voltage very accurately controlled. We would accordingly suggest your studying the catalogs of those concerns which advertise in Motor Age and then pick out the set which suits your pocketbook and your shop requirements.

The Best Voltage Regulator—A Battery

Q.—I intend to use a Chevrolet 490 engine as a stationary engine to pull a wood saw. I intend to use dry cell batteries to start on and the generator to run on, and not use any battery. I was thinking of rigging up a kind of voltage regulator by using the core and the fine winding of a 6 volt cutout and mounting some Ford coil points over the core and running the field current through the points. I would then have a resistance across the points. Let me know if this would work and give all the information you can.—William A. Fowler, R. R. No. 2, Montrose, Iowa.

There is nothing that the Clearing House editor enjoys more than to work on problems of this sort. However, from a practical standpoint it would be a great deal better to have a storage battery. If you do want to fix up a voltage regulator it would be better to buy one already made and source of supply on regulators of this kind will be given by separate letter.

Perhaps you are thinking of the weight and also the cost of a battery of this kind. You would only need a small battery, however. You can probably get some battery shop to build up a light battery in a regulation box. They can use about five plates in each cell, filling up the rest of the space with separators.

This will give you enough current to start on, assuming you crank the engine by hand and you can cut the generator charge down so as to give two or three amperes or whatever you need to keep the battery charged. This can be done by shifting the third brush or if this does not cut down the current enough you can connect some resistance wire in series with the circuit of the generator. Then if you ever have any radio batteries to charge you can connect them in parallel with the regular small storage battery on the engine, boost the charging rate to 12 or 15 amperes and have a charging set at the same time.

The voltage regulator design presents quite a problem for a good engineering department and you will probably have trouble working it out in the way you suggest.

Motor Age's

FLAT RATE FORUM

Edited by B. M. Ikert

Flat Rate on a Yearly or Mileage Basis

Every now and then somebody talks about selling flat rate contracts on an annual basis. That is, the owner of a motor vehicle or fleet of vehicles pays the dealer or service station a stipulated sum to cover all maintenance work on the vehicle or vehicles for the period of one year. Usually this cost does not include oils and greases or similar supplies, but does include broken parts or parts that have worn and must be replaced. Naturally the proposition does not cover damage resulting from collision or the car owner's carelessness.

Selling flat rate on a yearly contract basis has met with different reaction by dealers and the men engaged in the maintenance of motor vehicles. Some dealers hold that many car owners are favorably inclined to the idea of paying so much per year or so much per 30,000 miles or whatever the contract calls for and be assured that their motor cars always will be performing at the highest point of efficiency. Where such contracts are arranged between dealers and car owners, usually the former insist that the car must be brought into the service station at regular intervals for inspection and adjustment. Naturally this is done to forestall repair operations that are quite involved and may cost the dealer considerable money.

Those opposed to this system, and it seems that their point is well taken, say that selling flat rate on a contract basis over a period of a year or on a mileage basis for that matter, promotes carelessness of the vehicle owner. In other words, the car owner takes an attitude of "I should worry, the service station keeps my car in condition." It is also claimed by many that the dealer or service station operating under such a plan puts his figures high enough so that he is not going to lose on the proposition. Hence it would seem that in order to gain all confidence on the part of the car owner it is best to stick to the flat rate system and sell it as has been done up to this time.

COMPARATIVE TIME RECORD

OPER. NO. DESCRIPTION

ORDER NO.	DATE	EMP. NO.	EMPLOYE'S NAME	EMP. RATE	TIME TAKEN	TIME ALLOWED	GAIN HOURS	GAIN AMOUNT	LOSS HOURS	LOSS AMOUNT
			TOTALS							
			AVERAGES							

THINGS THAT HELP FLAT RATE

Here is shown the comparative time record used by the Cadillac Motor Car Co. As the time tickets themselves do not form a suitable means for comparison, it is necessary to have some record on which the data from the time tickets can be entered. These time records are useful for comparison of the actual time taken by different mechanics with each other and with the time allowed.

Lincoln Changes and Flat Rate

While it is pretty well known generally that any changes in design of the Ford Model T are applicable to all cars of that model no matter how old, it is perhaps not so well known that this same thing applies also to the Lincoln.

At the monthly meeting of the Metropolitan Section of the S. A. E. held during the New York Automobile Show, Thomas J. Little, chief engineer of the Lincoln Division of the Ford Motor Co., said any changes made in the design of the Lincoln are so made that they can be applied to all cars of that make ever turned out. Naturally this makes it much more difficult to work out any changes in design, but it has the big advantage from a maintenance standpoint in that the basic design upon which flat rate operations have been worked out is not changed.

Filing Flat Rates

Q.—I have noticed a few times that readers have requested suggestions in regard to filing the flat rates published weekly. I have found it most practical to use a card system for indexing them without cutting or mutilating the magazine in any way. I use 5 by 8 inch cards with index tabs for each car and have them headed as shown with the name of the car on the tab.

HUPMOBILE

Assembly — Date

Front Axle — 12/24/25

I also use this card system to index the Reader's Clearing House items and new car details. It sounds like a large order to keep up such a system, but if filed each week it takes but a few minutes and saves a great deal of time when a certain subject is wanted in a hurry. —Clyde E. Foster, 1029 Fulton Ave., San Antonio, Texas.

MOTOR AGE'S FLAT RATE FORUM

No. 51

Flat Rates For

OLDSMOBILE CLUTCH OPERATIONS

Model 30

Manufacturers' Official Designation Group E-1		Time Hrs.	Time Min.
1	Adjust clutch and free up pedals	1	
2	Install new clutch release bearing	4	
3	Install new clutch pedal	1	15
4	Install new clutch spring	4	
5	Install new clutch mounting ring	4	
6	Install new clutch pressure plate	3	30
7	Install new clutch driven plate assembly	3	30
8	Install new clutch driven plate facing	4	15
9	Install new clutch release yoke	2	45
10	Install new clutch	3	30

EDITORIAL

Keep 'Em Rolling

AUTOMOBILE factory executives are thinking along the line of service more seriously than ever. That was apparent from their expressions at luncheons and meetings during the national show periods. Some of them put more emphasis upon improved servicing methods and facilities than anything else in their talks to dealers.

This is apparently going to be a year of extraordinary effort in service development. It would be impossible to make too much headway over that route. Motor-wise Americans demand efficient servicing for the cars they purchase. They are reluctant about taking on a car which suggests an element of doubt on this very vital point. One of the foremost thoughts in the prospect's mind when looking for a car is: "What is going to happen to me in case of trouble with my buy? Where will I have to go for corrections and how long will I have to wait?"

And the car buyer is going to get continually more insistent in his maintenance demands.

The beauty about this from the standpoint of the automobile dealer is that the servicing of cars is a commodity which he offers for sale. It is a branch of his business susceptible to extensive development and the larger he grows in this phase of the work the better are his chances for the sale of motor vehicles. See that the car you sell is kept in good running order, check up at intervals to make sure the owner is thoroughly satisfied—and the way is blazed for a repeat sale when the time comes for that owner to turn the old car in on a new one.

High efficiency in the maintenance department has two prime objectives—first to keep the owner "sold" on the particular make the dealer handles and the next to make money and get prospects through general maintenance operations. Much of the dealer's future profits will be passed to him by the "man at the back door." Begin at once with special efforts behind the maintenance department.

Put your crediting on such a basis that friends will not have occasion to felicitate you on your "many unhappy returns."

As to Big Used Car Stocks

USED car stocks seem to be much too large in some localities. Here and there are situations which are rather uncomfortable, with accumulations of second hand vehicles being exceptionally heavy even for this season of the year.

That used car stocks should be larger than normally where new car sales have been above normal is logical, for with more new car sales more used cars will be taken in. And in most sections the new car business of recent months has been at healthy or record heights.

Where the dealer might be concerned over his used car position we might find that he is not thinking in terms of proportion—the rate of trade-in stocks as applied to the volume of new car business. In a properly managed business used car stocks are great or small only when compared with the number of new cars disposed of by the trade-in route. If his new car sales increase without an increase in the proportion of "clean deals" the dealer cannot escape the necessity of handling more used cars. That is inevitable.

All of which means that when new car business steps up efforts in the used car department must be stepped up. Pressure behind used car sales must be increased. The business has grown and it calls for an enlargement of the general program.

Automobile merchants who are too well loaded with used cars right now would do well to plan some early and special campaigning to clear their floors. They certainly do not want to go into this year of excellent opportunity with a used car handicap staring them in the face. And it is always timely to caution against wild allowances. There are good profits ahead for the tradesman who is sane and enterprising and who keeps his used car situation under control.

They say the old-fashioned horse trader is about extinct. The truth is he now goes up and down the "row" trying to swap old cars for new ones.

For Safety's Sake

FOR many years the Yellow cabs that color Chicago's streets went without bumpers. As every one knows they are sturdy vehicles, protected in front and rear by unusually strong frame horns, and seldom came out second best in a collision. But now Yellow cabs are wearing bumpers, both front and rear, and another victory for safety has been won. Are you selling the safety that good bumpers give, to the car owners in your community?

That long string of rubber which causes the ball to return to the small boy's hand—is the outfit's "service department." Real servicing always brings them back.

RECORD FEBRUARY OUTPUT EXPECTED

Shows Result in Heavy Demand for Automobiles

Dealers' Stocks of New Cars at Unusually Low Point But Used Sales Decline

NEW YORK, Feb. 10.—The record January output of 333,727 cars and trucks will be exceeded this month, despite the lower number of working days, if present schedules are maintained. A number of the largest producers are straining their facilities to the utmost to get cars into the hands of distributors and dealers. So far the industry has maintained the course predicted for it several weeks ago, and the rapid rate of production and sales anticipated for the early months has been established.

The automobile shows now being held in the large cities and in some of the smaller centers have been unusually successful, and this is the main reason why dealers' stocks have not been increasing as rapidly as the heavy production schedules might appear to indicate. The weakest points on the sales map, it is interesting to note, are in the main those in which the annual shows have not yet been held.

The reduction in tire prices not only will help the automobile manufacturers maintain satisfactory profits and prices, but it should bring the public back into the market for tires and thus relieve the dealers of some of their surplus.

Taken by and large, the only immediate source of disturbance in automotive sales is the used car situation. This is rather worse than usual, because there undoubtedly has been considerable forcing of the new car market during the last two or three months, and new cars have been sold at the expense of the second hand vehicles. The current agitation about time sales, and especially the advertising of favorable installment plans, has had the effect of bringing the possibility of buying on time forcibly to the public attention. As a result time sales have been on the increase, and experience has shown that the installment buyer is more likely to invest in a new car than an old one.

Sales of accessories and parts are excellent, the exception being in those parts of the country where cold weather and storms have interfered with the use of cars.

Dodge Brothers Sets Record

DETROIT, Feb. 8.—January was the best January in the history of Dodge Brothers, Inc., it was stated at the factory today following the giving out of figures showing the sales made by Dodge Brothers dealers and including Graham trucks. Retail sales of the new cars for the four weeks ending January 30 amounted to 19,218 cars. New car deliveries amounted to 14,943 cars, a gain of 58 per cent and 67 per cent over the same period in 1925. Factory shipments of cars and trucks totaled 22,135 compared to 15,683 in January of last year.

Plane Prices Like Flying Are High

WASHINGTON, Feb. 6. — The cost of a modern airplane, in contradistinction to an automobile, was given this week before the House Military Affairs Committee, considering air defense.

The cost to the army of a modern airplane, without engines or equipment was placed at $8,000: observation and pursuit plane, $12,000; and bombardment, $27,000. The total cost of the latter plane, fully equipped, would be $60,000, including a $15,000 motor and an $800 compass.

The average life of these planes, it was testified, is five years.

Profit Sharing Issues Are Resumed by Ford Co.

DETROIT, Feb. 6.—Ford Motor Company profit sharing certificates were again available to employes beginning Feb. 1. Issuance of the certificates was temporarily discontinued last April when a quota of $25,000,000 was reached.

The plan under which employes receive each six months a share of the profits originated in 1920. It was announced at that time that when the men in the shops were given their pay envelopes they would be allowed to deposit with the company any amount of money that did not exceed one-third of their wages. The company's banks which were installed in the shops were to hold the money until $100 had been paid over. For each $100, a certificate guaranteeing the men at least 6 per cent on their investment was issued.

The only change in the original plan is that employes will not be allowed to devote more than one-fourth of their pay to the purchase of certificates.

Although the company does not promise more than six per cent interest, it has always ranged from 14 to 16 per cent yearly.

Stutz Breaks Record in Chicago

CHICAGO, Feb. 6.—"If any doubt existed as to the acceptance of the new Stutz Safety Chassis by the automobile public, Chicago's record of sales performance would dismiss it instantly," so said F. E. Moskovics, president of the Stutz Motor Car Co., in the closing hour of Chicago's National Automobile Show here tonight. Chicago's sales records totaled 236 cars, representing a consumer list of $778,800.

Hudson-Essex Prices Are Now Quoted "Delivered"

Company Lists Cars Direct to Buyer With Equipment and Freight Included

DETROIT, Feb. 8.—One of the most revolutionary changes in retail sales policy since the F. O. B. Detroit system of pricing cars went into effect, has been announced by all Hudson-Essex distributors.

Under this new policy, the system of pricing motor cars at F. O. B., Detroit, has been abandoned. Prices quoted and advertised in each territory will be the prices at which cars are actually delivered to buyers in that territory with war tax, freight and equipment added. The value of equipment is approximately $55 and formerly was bought by the consumer as extras.

Instead of the buyer having to add freight, war tax and other miscellaneous charges to the list price in order to obtain the final retail selling price, dealers and distributors will quote only the actual delivered price. To do this it has been desirable to establish sales zones with each zone having a set delivered price which will apply to all dealers in that zone.

Reports which have been current that there was a possibility of the factory making one price throughout the country are absolutely untrue. Under the new system an Essex coach in Detroit will deliver for $860, $13 more than the old delivered price of $847; the Hudson brougham will deliver for $1540 or $16 less than the old price, the Hudson coach is $19 greater and the Hudson sedan $43 less. In the Boston zone the delivered prices of the Essex and Hudson coaches will be the same as before.

While the Hudson brougham and sedan will be $25 and $50 less in Los Angeles there will be an increase of $10 and $20 on the two coach models and a decrease of $10 and $25 on the Hudson Brougham and sedan. In New York the prices will result in an increase of $7 on the Essex coach and $18 on the Hudson coach, while the Hudson brougham and sedan will be delivered for $15 and $45 less than before.

One of the chief advantages set forth to the consumer by the new plan is that he will know definitely just what his car will cost, as there are no extra handling charges.

Will Distribute Locomobile

INDIANAPOLIS, Ind., Feb. 6.—George M. Spindler, manufacturers agent here for many years, has been appointed distributer for the Locomobile in the Indianapolis territory. He has opened a sales agency at 955 North Meridian street.

Battery Makers See Need of Better Radio Dealers

Growth of Wireless Given Credit for Big Boost in Sales of Electric Products

CHICAGO, Feb. 6.—The mushroom-like growth of the radio business and the opportunity which it presents for those in the battery business and allied lines was pointed out at a meeting of the National Battery Manufacturers' Association held in Chicago on Friday of show week.

Ernest Ingold of the Atwater Kent Company showed how the business had grown faster than the automobile business, being among the first twelve industries as far as annual sales are concerned.

According to Mr. Ingold, the jobbers handling motor car parts and accessories had, as a class, failed to grasp the opportunities in radio. The music industry also, except in the case of sets that needed no aerial or ground, had not realized the opportunities, with the result that separate radio wholesalers had sprung up to handle the business.

The necessity of service was pointed out, also the need of building better radio retailers, the weakest link at present in the radio merchandising chain.

The market for radio batteries was predicted to remain strong, as far as the A battery is concerned with possible dropping off in B battery sales due to increased use of B battery eliminators, which improve on the B battery in appearance and require less attention although constituting no improvement in operation, according to Mr. Ingold.

Other talks were made by O. B. Towne, commissioner, Charles Dempwolf, A. R. Reid, chief chemist for the U. S. Light and Heat Corp., Frederick S. Pope, vice-president of the Chicago Trust Co., and J. A. White of the U. S. Light and Heat Corp.

Firestone Reduces Prices Straight 10 Per Cent

AKRON, Feb. 6.—President H. S. Firestone, of the Firestone Tire & Rubber Co., has announced a straight reduction of 10 per cent on all Firestone tires and tubes, effective Feb. 1. Dealers were notified at the same time that they would be protected against further possible price reductions on "spring stock" orders until July 1.

Mr. Firestone said he looked for a further decline in the crude market, which would be accompanied by more tire price reductions. Firestone has frequently been a leader in any price changes in the industry, and officials of other large companies in the Akron district are preparing to meet the revised schedules. This is the first price cut put into effect for more than a year.

Adds Wills Ste. Claire

HARTFORD, Conn., Feb. 6.—Seymour & Michaels, 971 Farmington Ave. and 148 Allyn street, Flint distributor, has taken on the Wills Ste. Claire in this territory. The firm has been rendering service on Wills Ste. Claire for some time past.

Mayo Forms Firm to Make Shop Equipment

DAYTON, O., Feb. 6.—An enterprise of interest to the garage and maintenance branches of the automotive industry was inaugurated here with the opening of the large Mayo Equipment Company plant. This firm has developed a line of equipment intended to bring small shops a number of jobs that ordinarily go to large shops with expensive special machinery. The equipment includes a 3-ton demountable wrecking crane, a portable heavy duty press which weighs but 70 lbs., and an assortment of gear and wheel pullers. Other items are to be added.



John C. C. Mayo

At the head of the new firm are John C. C. Mayo, a well known financier, and his associate, Alexander Cameron. An interesting story explains Mr. Mayo's entry into the automotive equipment field. For several years he has operated a chain of filling stations throughout Kentucky, West Virginia and southern Ohio, in connection with his oil production interests.

Last year he learned of the work of E. G. Livesay, inventor, who had been working on just the type of equipment which Mr. Mayo felt was in demand. As a result, Mr. Mayo soon purchased Livesay's factory and patents outright, disposed of the factory, and established the Mayo Equipment Company in a modern large plant which is rapidly going into capacity production.

Chevrolet Sells 25,452 Automobiles in January

Grant Tells Dealers More Selling Effort Is Needed In Car Industry

CHICAGO, Feb. 6.—A total of 25,452 cars were sold by the dealers of the Chevrolet Motor Co. from January 1 to 30, R. H. Grant, vice-president and general sales manager told the dealers and associate dealers of the Great Lakes region at a meeting held here yesterday. The best previous January in the history of the company was one in which 11,800 cars were sold, Mr. Grant said.

The session was the second annual business meeting of the dealers and associate dealers of the district.

Mr. Grant declared that heretofore the automobile industry generally has suffered from a lack of selling effort. He believes that the record year marked up by Chevrolet in 1925 resulted largely from the selling methods instilled into dealers by the company and the consequent greater effort made by the dealers during that year.

Mr. Grant cautioned the dealers against selling "side-line" articles and told them to sell one thing, the Chevrolet, and sell it more intensively. To this end he promised that the company would back up the dealers with a large volume of advertising, direct mail canvassing and more intensive sales co-operation.

He put two points before the dealers upon which their sales efforts and talks should be based. The first was that the dealer should ride in a Chevrolet himself and insist upon his salesmen doing likewise, in order to prove to themselves the riding qualities and general performance of the improved product . The second point upon which the dealer should place emphasis, he said, was upon a comparison of the delivered and financed prices of any Chevrolet model and its nearest and largest competitor in the field.

Franklin Reduces Rates On Wholesale Financing

CHICAGO, Feb. 6.—Reduced wholesale financing rates are made available to Franklin dealers under a factory plan recently put into operation. Under the plan the factory finances 80 per cent of the wholesale price for four months at a rate of 8 per cent per annum, this including insurance coverage. The Franklin company has an arrangement with the National Surety Co., which bonds the dealer who adopts the plan.

S. E. Ackerman, sales manager of the H. H. Franklin Manufacturing Co., commended the plan to Franklin dealers at a luncheon in the Drake Hotel here Wednesday saying it would help them maintain adequate stocks and a complete line of display and demonstration cars.

National Garages, Inc., Is Formed in Detroit

New Company Will Establish Chain of Parking Hotels in U. S. and Canada

DETROIT, Feb. 8.—Formation of the National Garages, Inc., with capitalization of $500,000, is announced here by a group of men, included in which are several operating heads of great automobile companies. The new concern will purchase and take over a certain percentage of stock in Detroit Garages, Inc., Detroit, Central Chicago Garages, Inc., Chicago, and Pittsburgh Parking Garages, Inc., Pittsburgh, and will supervise the management of these three companies.

The new company also has negotiations pending for parking garage companies to be formed under its supervision in Philadelphia, Baltimore, Syracuse, Seattle, Dallas and New York. Investigation of possible other sites for parking garages has been started, in order that a chain of such concerns might be established throughout the United States and Canada.

Officers of the National Garages, Inc., are Howard E. Coffin, vice-president Hudson Motor Car Co., Detroit, president; Witter J. Peabody, vice-president, Detroit, Garages, Inc., first vice-president; William M. MacLachlan, Simon J. Murphy estate, Detroit, second vice-president; Horace B. Peabody, treasurer, Detroit Garages, Inc., treasurer; and Charles Wright, Jr., secretary.

Among those interested in the project are the following: O. H. Burke, H. G. Christman Co., builders, Detroit; Howard Bonbright, Securities Corporation, Detroit; Frank P. Book, Book-Cadillac Hotel, Detroit; A. H. Buhl, president, Buhl Land Co., Detroit; L. D. Buhl, president, Buhl-Verville Airplane Co., Detroit; Roy D. Chapin, chirman of board, Hudson Motor Car Co., Detroit; H. B. Clark, White-Weld Co., investment bankers, New York; Howard E. Coffin, vice-president, Hudson, Detroit; Robert O. Derrick, Robert O. Derrick, Inc., architects, Detroit; D. Dwight Douglas, acting president, First National Bank, Detroit; M. P. Hammond, president Gemmer Manufacturing Co., Detroit; Albert Kern, J. B. Ford Trust, Detroit; H. William Klare, Statler Hotels; George T. Leach, A. B. Leach & Co., investment bankers, Chicago; Bascom Little, Crowell & Little Construction Co., Cleveland; T. L. B. Lyster, construction engineer, Niagara Falls, N. Y.; Alvan McCauley, president, Packard Motor Car Co., Detroit; William M. MacLachlan, Simon J. Murphy Estate, Detroit; Lynn McNaughton, vice-president, Cadillac, Detroit; W. Ledyard Mitchell, vice-president, Chrysler Corp., Detroit; Dr. Fred T. Murphy, director, Chrysler Corp., Detroit; William H. Murphy, Murphy Family Trust, Detroit; M. L. Newhall, Sun Oil Co., Philadelphia; Frank D. Nicol, Nicol, Ford & Co., investment bankers, Detroit; Horace B. Peabody, treasurer, Detroit Garages, Inc.; Witter J. Peabody, vice-president, Detroit Garages, Inc.; Wesson Seyburn, director, Dodge Estate Corporation, Detroit; Charles B. VanDusen, president, S. S. Kresge Co., Detroit.

The finance committee of the company is: Roy D. Chapin, Howard Bonbright, Frank P. Book, and A. H. Buhl.

A. M. A Discusses Distribution

CHICAGO, Feb. 6.—Trends of distribution in the automotive industry was the subject of discussion before the Automotive Manufacturers' Association at a conference held in the City Club Thursday evening of show week. Leon F. Banigan, editor of Motor World Wholesale was the principal speaker, and following his address a round table discussion was held in which the following men participated: Charles F. Hodgson, Weaver Manufacturing Co., S. A. Fulton, the Fulton Co., George L Briggs, sales manager of the Wilkening Manufacturing Co., and Alexander Johnston, editor, Automotive Daily News.

Hoffman Tells Dealers To Analyze Business

CHICAGO, Feb. 6.—Analysis of the dealer's business from an accounting standpoint is necessary in order that intelligent effort may be laid out in advance, Harold Vance, general sales manager of the Studebaker Corp., told more than 600 dealers gathered at the Blackstone hotel Thursday evening of show week.

Dealers from several mid-western branches attended the dinner and addresses were delivered by Mr. Vance, A. D. Lasker of the Lord & Thomas advertising agency and Paul G. Hoffman, vice-president of Studebaker.

Mr. Hoffman declared that every dealer should determine in advance what his fixed expenses for the year will be, and taking this figure as a basis, determine the number of cars he must sell to meet this expense and make a profit. He told the dealers that if they would estimate their business closely enough in advance there would be no losing money on used cars.

Mr. Hoffman told the dealers that salesmanship is the transferring of the salesman's convictions to the mind of the prospect, and emphasized the quality built into Studebaker cars as a conviction building medium in the contact between salesman and prospect.

All Chevrolet Dealers to Give Full Duco Service

DETROIT, Feb. 6.—A plan whereby Chevrolet dealers throughout the country will be able to give complete Duco service is being worked out with the E. I. duPont de Nemoirs and Company, according to J. P. Little, manager of the parts and service division.

In the past, Duco service was available only through the distributors and refinishing station of the duPont organization. Under the new plan each Chevrolet dealer will be equipped to do all classes of Duco work, from the minor operations to a complete refinishing job.

As a result of the plan, complete Duco equipment has been installed in all of the 20 Chevrolet service schools in the United States.

Louisville Dealers Look For Brisk Show Season

Nearly All Space Taken for Event Scheduled to Begin February 15

LOUISVILLE, Ky., Feb. 6.—Officials of the Louisville Automobile Dealers Association announce that plans for the annual automobile show are nearing completion. The coming exhibition, which will be staged in the Jefferson County Armory, Feb. 15 to 20, will be the eighteenth consecutive show held under the auspices of the dealer organization.

Present indications are that more than 200 cars will be exhibited on the main floor and accessories having a total value of nearly $200,000 will be shown on the balcony, according to J. Garland Lea, secretary of the association.

Louisville dealers believe public interest will be greater this year than ever before, due to prosperous conditions locally and generally. Increasing prosperity of the Kentucky metropolis is reflected in the large amount of space reserved for the show. Only three small spaces are still available in the balcony.

A new decorative scheme, described as harmonious and beautiful, will furnish the setting. The color scheme is blue, crimson and gold, with a blue canopy, containing 126,000 yards of cloth, covering the entire ceiling of the building. Eighteen immense chandeliers, each containing 130 globes will aid in illuminating the huge building. An immense painting, representing a huge stone bridge will stretch across the north end of the armory, forming a background for the orchestra and the "Goddess of Transportation." Several lighted cars will be placed upon the bridge.

Herbert Buckman, manager of the Cleveland Automobile Manufacturers and Dealers Association, is scheduled to address a gathering of approximately 300 dealers of Louisville and the state at a luncheon meeting to be held Wednesday, Feb. 17, during show week.

Ford Agency Formed

MUNCIE, Ind., Feb. 6.—W. W. Spurgeon, W. E. Hitchcock, J. L. Galbraith and C. L. York have organized the Mun-Ford Sales Corporation to distribute motor cars and tractors, including parts. The company will specialize in Ford cars and Fordson tractors.

Sasscer Succeeds Zimmerman

CLEVELAND, O., Feb. 6.—L. D. Sasscer, branch manager for the Peerless Motor Car Corporation at Kansas City, has been promoted to sales specialist at the home office of the Peerless Motor Car Corporation according to an announcement made by the company. He succeeds Walter Zimmerman, recently named as manager of the export department of the Peerless Motor Car Corporation.

Production in January Totals 333,767 Cars

New Record for Initial Month Is Marked, According to Figures of N. A. C. C.

CHICAGO, Feb. 6.—Production last month of cars and trucks totalled 333,767, according to preliminary estimate of the National Automobile Chamber of Commerce, announced at the meeting of the board of directors. This figure marked a new January production record in the industry.

The directors also considered the rubber situation and decided it was necessary to pursue the industry's rubber project aggressively. It was reported that the New Zealand government has passed a law regulating the production of kauri gum, which is used in the paint and varnish industries. This is taken by the N. A. C. C. to indicate that the control of the raw material movement is spreading rather than being checked.

The release during the week of 100 per cent production under the Stevenson restriction act is taken to be a joker because the Stevenson act provides for 100 per cent standard production which does not mean the total capacity of the rubber plantations by any means, the standard production being simply an arbitrary figure.

The directors accepted an invitation to the Cuban Highway Congress at Havana, March 11-12. Those selected to represent the N. A. C. C. were John N. Willys, Roy D. Chapin, George F. Bauer and Alfred Reeves, general manager of the N. A. C. C.

Putnam Is Promoted

DETROIT, Feb. 6.—Harold B. Putnam has been made advertising and promotion director of Thomas J. Doyle, Inc., Dodge distributor for the Detroit territory. Mr. Putnam has been at various times salesman and branch sales manager of the company.

Rubber Firms Merge

BUFFALO, Feb. 6.—John H. Kelly, president of the Hewitt Rubber Co., of Buffalo, announced the merger of the Gutta Percha & Rubber Mfg. Co., of New York and Brooklyn with the Hewitt Co. This means that the activities of the Gutta Percha & Rubber Mfg. Co., will be brought to Buffalo as well as many of the leading members of the personnel. The Gutta Percha & Rubber Mfg. Co. is a million dollar concern owning rubber manufacturing patents more than 50 years old in some cases and maintaining branches in most of the leading American cities.

Continental Elects Officers

DETROIT, Feb. 6.—At the annual meeting of the board of directors of Continental Motors Corporation, the following officers were elected: R. W. Judson, president; W. R. Angell, executive vice-president; W. A. Frederick, vice-president in charge of engineering; R. M. Sloane, treasurer, and T. M. Simpson, secretary.

Heads New Moon Subsidiary



W. R. Brashear, Vice President, Moon Motors Corp., subsidiary of Moon Motor Car Co.

Ford Truck Sales Gain

DETROIT, Feb. 6.—Upwards of 217,112 Ford one ton trucks were sold during 1925 it was said at the general offices of the company. This number is an increase of 16,826 over the sales for 1924. This demand for trucks, it was said, was due largely to the increase in truck buying by the agricultural districts of the country.

Rochester Has Big Show

ROCHESTER, N. Y., Feb. 6.—The most successful automobile show in all the eighteen years of annual automotive expositions by the Rochester Automobile Dealers' Association was held at Edgerton Park here all last week. New attendance and new buying records were established. The attendance for the entire week was 55,319, an increase of 10,183 over the 1925 show record. Approximately 400 cars were sold at the show this year while less than 300 were sold at last year's show. In the first half hour of last week's show six cars were sold.

Harris Heads New Division

DETROIT, Feb. 6.—James O. Harris has been placed in charge of the Jefferson Avenue division of the Detroit Cadillac Branch. The maintenance facilities of the branch have been doubled recently and now cover two floors with a total floor space of 36,000 square feet ad a capacity for maintenance work on 75 to 100 cars per day.

Nash Reports Net Profit Of $16,256,216 in 1925

Most Profitable Year in History of Organization Is Shown in Balance Sheets

KENOSHA, Wis., Feb. 6.—Nash Motors Co. for the 12 months ended November 30 enjoyed the most profitable year in its history. Throughout the year, according to the annual report, demand exceeded plant ability to supply and peak production was maintained except for a short period in the late fall, when there was a slight curtailment for rearrangement of machinery and installation of additional facilities.

The report, covering Ajax Motors Co. as well as Nash, shows that more than 93,000 cars and trucks were sold through a dealer organization of increasing size, and there was an increase of 114 per cent in foreign business.

Inventory as of November 30 was somewhat larger than a year ago but when considered in relation to increased operations and the tendency of market prices is regarded as well balanced and conservative. The company was again able to turn its inventory 12 times during the year.

Net profits were $16,256,216.02 and the only indebtedness, except reserve for taxes, is $3,876,299.66. Current assets were $42,530,744.78 and surplus was $25,077,872.19, compared with surplus of $14,240,965.17 as of December 30, 1924.

During the year the company purchased for retirement $6,966,800 of its preferred stock in anticipation of retirement from its preferred on February first. The amount of peferred still to be retired is $8,038,400.

The company paid $5,419,309 in dividends and closed the year with $23,946,128.86 cash on hand after setting aside the funds for retiring the preferred on February first.

Graham Joins A. E. A.

CHICAGO, Feb. 6.—M. D. (Doc) Graham has been added to the Automotive Equipment Association merchandising department to assist Arthur R. Mogge in field work. When the orginal "Ask 'Em to Buy" campaign was launched five years ago Graham was with Sparkes-Withington and traveled all over the country addressing dealer meetings and showing the Sparton and A. E. A. films. Later he was sales manager of Cumings Bros., jobbers at Flint, Mich., and more recently was sales manager of Mosler Metal Products Co.

Detective Sells Fords

EVANSVILLE, Ind., Feb. 6.—Emmett Bell, former chief of detectives in the preceding administration, has been engaged as retail salesman by the Eckler Motor company, Ford dealer.

Milwaukee Dealers See 1926 as Brightest Year

Record Sales at Annual Show Fire Euthusiasm of Merchandisers All Over State

MILWAUKEE, Feb. 6.—No year in the history of the automobile industry has loomed so brightly in advance as does 1926 in the almost unanimous opinion of the leading distributors and dealers of Milwaukee. Distributors with their fingers on the pulse of dealer sentiment throughout the state feel that optimism is well grounded in the solid financial structure of the state's industry and agriculture, and upon the undeniable enthusiasm for the motor car being manifest on every side.

The record sales made at the Milwaukee Automobile Show in mid-January have fired distributor, dealer and public alike with new enthusiasm over the motor car prospects for the next 12 months.

Total new car sales registered during 1925 in Wisconsin were 80,895. This is roughly 4,000 sales under the 1924 total sales record of 84,732. The total number of cars registered in Wisconsin, Jan. 1, 1925, was 463,251 to which may be added the 1925 sales of 80,895 to give a Jan. 1, 1926 registration total of 544,146.

Used car sales are fair to poor, depending upon what the dealer has to offer. Closed cars have a monopoly on the used car sales and only an occasional sport model roadster is sold. Coupes are in big demand and there is such an abundance of used car stock in the city that price cutting has been resorted to by dealers to move their stock and many are taking considerably under the allowed price of cars to clear their floors.

Expansion of many distributors into the used car business on an independent scale—that is through organization of a separate sales place distinct from the new car retail quarters, is one method being used to dispose of the accumulating stocks. The large number of sales at the show is going to make the used car problem more acute because only a relatively few of the purchasers were buying their first car.

Thermoid Has New Price Plan

TRENTON, N. J., Feb. 6.—The Thermoid Rubber Company of Trenton, New Jersey, has discontinued the consumer price list on brake lining, which has been in effect for more than 20 years and have adopted new trade or dealer list prices on Thermoid Hydraulic Compressed and Thermoid Interwoven Brake Lining.

Month's Titles in Big Gain

DETROIT, Feb. 6.—Titling of new cars in Wayne county during January almost doubled those for January 1925. Last month a total of 623 open and 2624 closed cars or a total of 3247 were titled. In 1924 there were 479 open and 1399 closed cars, a total of 1878.

Titling of new trucks more than doubled the number for January 1925. During the past month, 653 trucks were titled as compared to 316 for the same month in 1924.

Pittsfield Holds Show

PITTSFIELD, Mass., Feb. 6.—Fifty makes of cars and an extensive display of motor accessories and radio equipment were on exhibit at the annual show of the Pittsfield dealers, in the State Armory, Jan. 28 to 30, inclusive. The ceiling and walls of the big drill shed were covered with white cloth, trimmed with yellow and liberally reinforced with evergreen and floral decorations. The room was brilliantly lighted with 50 concealed domes. The attendance was large and much spring business was lined up for the dealers.

Will Distribute Stutz

DETROIT, Feb. 6.—Leo F. Mullin, 5850 Cass Avenue, has been appointed Stutz distributor for Detroit. He is one of the veterans of Detroit's Automobile Row and prominent in civic affairs.

1000 Is Target for Stutz In Chicago Branch's Realm

CHICAGO, Feb. 6.—As a feature of show week the Stutz Chicago Factory Branch, Inc., of which Floyd D. Cerf is president, gave a luncheon for Stutz dealers Wednesday at the Metropople Hotel. Guests included F. E. Moskovics, president, and E. S. Gorrell, vice president, of the Stutz Motor Car Co. of America.

Mr. Cerf announced that the Chicago organization has set out to sell 100 new Stutz cars in 1926 and that its goal for the Chicago show is 350 sales. Up to noon Wednesday 100 sales had been made at the show by the Chicago organization. Telegraphic reports from other cities where the Stutz has been or is being exhibited at local shows told of unusually large sales.

In a brief address Mr. Moskovics told the dealers how all the mechanical features of the new Stutz have been worked out to produce a balanced vehicle that will give consistently good performance.

Canadian Insurance Lower

WASHINGTON, Feb. 6.—Canadian insurance rates on motor cars have been considerably reduced, according to reports from Toronto received here by the division of commercial laws, Department of Commerce. The average drop for the various policies is about 15 per cent. Some 70 companies, members of the Canadian Automobile Underwriters' Association, doing business in the Province of Ontario, are adopting the new scale, and several companies not belonging to the association are taking similar action.

Service Stressed in Talk By Chrysler at Luncheon

Urges Dealer to Pay the Price of Competent Management As Business Protection

CHICAGO, Feb. 6.—More than 500 Chrysler dealers attended a luncheon given at the Congress Hotel here Thursday by the Chrysler Corporation. The principal speaker was Walter P. Chrysler, president and chairman of the board of directors of the company. Mr. Chrysler urged the dealers to look at least five years into the future and plan their business so as to progress constantly toward the point of prosperity and supremancy they would like to be enjoying at that time.

He emphasized the importance of service, declaring the one man who can most readily destroy a dealer's business, or build it up, is the man who meets the car owner at the back door. He urged dealers to pay the price necessary to get competent service managers and thus protect their businesses.

Other speakers were J. E. Fields, vice president in charge of sales, and Lee Anderson, vice president of MacManus, Inc., of Detroit. Mr. Fields told of the fixed purpose of the Chrysler organization to help its dealers in every possible way, but impressed upon them that the Chrysler company expects from them the volume of business that their respective territories should yield in order to make a satisfactory profit both for themselves and for the factory.

Following the close of the Chicago show Mr. Chrysler and Mr. Fields will start on a tour to the Pacific Coast and return. They will stop at various cities to hold sales meetings for Chrysler dealers.

Sell Moon and Diana

SEATTLE, Wash., Feb. 6.—Seattle Automobile Company, distributors for Moon and Diana cars, have recently appointed the following dealers for these popular makes:

B. C. Motors, Ltd., under the management of H. M. Gordon and Rex Pumphrey, Vancouver, B. C.; Knapp & Ronneberger, Ben Ronneberger, Mgr., Anacortes, Wash.; Wilkstrom & Wagner Motor Co., W. O. Wickstrom, Yakima, Wash.; North Washington Implement Co., Lynden, Wash.; Sears & Williams, Perry Williams and Cecil Sears, Aberdeen, Wash.; Lange Bros., Bellingham, Wash.; A. W. Patton, Bremerton, Wash.; Kuehner Bros., Leon J. Kuehner, Mt. Chehalis, Wash.

Harry W. Anderson Dies

NEW YORK, Feb. 6.—Harry W. Anderson, eastern district sales manager, Stutz Motor Car Co. of America, Inc., has died here. He was formerly sales manager for Stutz, Duesenberg and other motor car manufacturers.

Combination Coupe-Open Car to Be Built by Paige

Start Production in March on New Cabriolet Roadster Listing at $2295

DETROIT, Mich., Feb. 6.—Paige Detroit Motor Car Co. will start production in March on a new combination coupe and open type four passenger body to be called the cabriolet roadster which will be an addition to the present Paige 6-72 line. The list price will be $2295. The top of Victoria design fitted with landau irons has the appearance of a permanent structure but is so constructed that it can be lowered.

The windshield vertical members are non-movable and are a continuation of the front body pillars serving to provide the front support for the top when the latter is in the up position. A removable rear curtain element in the top permits communication between front and rumble seat occupants. Disappearing steel frames which fold over the tops of the lowered glasses to form a sill are used on both doors. Finish is in two tone lacquer. An ivory striped belt molding which starts at the radiator is carried just below the hood ledge to the rear of the door where it bends downward several inches and then continues in a curve to the end of the rear deck. Above the belt molding the finish is Sea Fog gray while below the panels are in Ocean Blue. Upholstery is a special grade of gray leather. Disk wheels of the demountable at the rim type are supplied as regular equipment.

Slight changes affecting both the standard and de luxe model Jewett cars have been made recently. In the future the standard Jewett models will carry nickeled radiator shells and the body exterior finish will be in high luster waxed and polished lacquer.

Changes in the finish and trim specifications on the de luxe models include a better grade of brown colored cloth upholstery. To match this the exterior will be finished in a two tone gray and drab combination. Shock absorbers formerly installed at the front on the de luxe models as regular equipment are now available at extra cost.

Chevrolet Clan Gathers

CHICAGO, Feb. 6.—A meeting of Chevrolet salesmen, including regional managers from the Atlantic to the Pacific, and northern and southern states was held Tuesday and Wednesday in the Bal Tabarin convention hall of Hotel Sherman for the purpose of discussing sales and organization problems, advertising and service. There was an innovation this year in the method of conducting discussions. Instead of having the central office do most of the talking, the different zone managers and the various firm and organization representatives were asked to come prepared with slides depicting the progress made and the method of work. Each talker outlined what he had been doing and what he hoped to do during 1926. Each man who talked gave a report on general business conditions in his section.

Good Selling at Show

ABERDEEN, Wash., Feb. 6.—The third annual automobile show of Grays Harbor was held here this week in the Rowe Building. Thirty dealers took part in the exhibition, which included distributors in both Seattle and Tacoma. Considerable interest was manifested in the new models and a prosperous season in the lumber industry of this section developed a number of actual sales during the show. John Stark of Portland, Ore., was again manager.

Williamsport Show Held

WILLIAMSPORT, Pa., Feb. 6.—The sixteenth annual motor car show of the Williamsport Automobile Dealers' Association was held last week at the Susquehanna Trail garage building with 55 models of various cars on exhibition under the supervision of 18 local dealers. It is estimated that upwards of 10,000 people witnessed the exhibit during the week.

Chicago Flint Dealers Are Offered Prizes for Sales

CHICAGO, Feb. 6.—Approximately 75 dealers operating under the Chicago Flint Co., distributor in the Chicago district for the Flint Motors Co., attended a luncheon at the Congress Hotel Tuesday as guests of Herman J. Rosenberg, president of the Chicago distributing concern.

Among the speakers were Mr. Rosenberg, Earl A. Martin, general manager of the Chicago Flint Co., J. H. Newmark, advertising manager of Flint Motors, and R. H. Mulch, vice president and general manager of Flint.

Moving pictures of the Flint plant were shown.

Mr. Rosenberg pledged the more complete co-operation of the Chicago distributor with the dealers. He said that his company, however, would expect every dealer in the territory not only to maintain his batting average of the last year, but to exceed it. He placed his 1926 sales goal at 5,000 cars. He declared that with the new advertising and sales policies of the Flint company, the dealers should sell three times as many cars as in any previous year.

Mr. Mulch told the dealers that if Mr. Rosenberg sold 4,000 cars next year, the Flint Motors Co. would give to the wife of the leading dealer in the territory, on Christmas Day, the highest priced model being built at that time; to the leading salesman, the next highest priced car being built at that time, and to the salesmanager of the leading organization, $500 in gold.

Business Conditions Best In History, Declares Nash

Manufacturer Highly Optimistic in Talk to Big Dealer Gathering During Show

CHICAGO, Feb. 6.—That general business conditions, with particular reference to automotive conditions, are on a more solid basis at this time than they ever have been before, was the conviction expressed by Charles W. Nash, president of Nash Motors, at a luncheon Wednesday for Nash distributors, dealers and salesmen at the Congress Hotel.

Mr. Nash declared that the Chicago territory has shown an increase of 59 per cent in sales volume during 1925, and that the first month of 1926 indicates that even greater things are to be expected this year.

A large number of dealers of the Chicago distributing territory under the Chicago Nash Co. were present at the luncheon, and Mr. Nash told them the fundamental principle upon which Nash business is founded is co-operation with the dealer. He cited the enlarged advertising plan of the company for 1926 as an example of the manner in which the company is co-operating with the dealer even more than ever.

"It is not so easy to get new dealers today as it once was," he said, "and a loyal dealer body is the greatest asset of any automobile manufacturer.

"Service is the greatest thing automobile dealers of today can give to bring the dollars back. Service men who can diagnose the trouble are an absolute requisite."

Speakers besides Mr. Nash were John Brewer, general sales manager of the Chicago Nash Co., and E. H. McCarty, sales manager of the Nash Motors Co.

Liberian Forces Increased

AKRON, O., Feb. 6.—Forces employed on the Liberian rubber plantations have been increased from 3,000 to between 5,000 and 6,000 negro laborers, according to W. D. Hines, secretary to H. S. Firestone, who has 1,000,000 acres of land under lease in the African republic. Additional labor is being recruited as rapidly as possible to increase the land under cultivation. The first group of Americans to be sent to the plantations are at work now. W. H. Johnston, the "advance man" in Liberia and a squad of 20 engineers are working under E. A. Ross, of Singapore, who is head of the development.

Change Meeting Date

CHICAGO, Feb. 6.—The board of directors of the Chicago Automobile Trade Association have changed the date for the holding of the regular annual meeting of the Chicago Automobile Trade Association from the second Monday in March to the second Monday in June.

Want More Stress on Shop Equipment at 1927 Shows

Exhibit and Association Managers Also Desire Better Accessory Selling Displays

CHICAGO, Feb. 8.—A definite program was outlined Thursday at the annual meeting of the National Association of Automobile Show and Association Managers at the Drake Hotel, to secure for every large sectional automobile show in 1927 a complete working exhibit of service shop equipment. With this program goes also a plan for better merchandising exhibits of automotive accessories at the sectional shows.

The plan includes the active participation of the Merchandising and Shop Equipment committees of the Automotive Equipment Association, of members of the Boosters clubs in the show areas, and of the large jobbers who are directly interested in the promotion of sales of both shop equipment and accessories to the hundreds of thousands in the trade who attend the sectional shows.

It is planned to help not only the manufacturer, jobber and the trade generally, but to definitely put across to the car owning public the advisability of patronizing those shops that are well equipped, if they would have their cars properly repaired.

Philadelphia, Cleveland, Detroit and Milwaukee each had a working exhibit of shop equipment this year and these exhibits were so successful, both from the sales and public interest standpoint, that it is felt the movement should be carried on on a larger scale.

Maj. Robert E. Lee, of St. Louis, was re-elected president of the association, Herbert Buckman, of Cleveland, vice president, and A. V. Coming, editor of Automobile Trade Journal, secretary and treasurer. The before shows convention of the organization will be held next summer at the Drake Hotel in this city.

Silver Anniversary Show In Detroit Is Big Success

DETROIT, Feb. 6.—Detroit's Silver Anniversary Automobile show conducted by the Detroit Auto Dealers Association came to a close with the greatest attendance record of any similar show. Approximately 150,000 persons paid their way to see the exhibits.

From the standpoint of business, the show also led its predecessors by a large margin. Although figures are not available as to the actual number of orders taken, preliminary estimates place the total at well into the hundreds.

Upwards of 200,000 square feet of space was necessary to house the exhibits which consisted of passenger cars, motor buses, trucks, motor boats and airplanes. A model service shop and accessories completed the show.

Buy Smith & Hemenway Co.

JAMESTOWN, N. Y., Feb. 6.—Negotiations have been completed whereby the Crescent Tool Company of Jamestown purchased the entire capital stock of the Smith & Hemenway Co., Inc., Irvington, N. J. Illness of Landon P. Smith is largely responsible for his selling out. Only the executive offices will be moved to Jamestown. The glaziers tool business of the Smith & Hemenway Co. has been transferred to Landon P. Smith, Inc., Irvington, but the rest of the "Red Devil" line of tools will be manufactured and sold by Smith & Hemenway.

Change Company's Style

EVANSVILLE, Ind., Feb. 6. — The former Hall-Eagans Chevrolet company, Fourth street and Blackford avenue, Chevrolet dealer, will hereafter be known as the General Chevrolet Sales company, according to permit received here from the office of the secretary of state, Indianapolis. V. M. Hughes is manager, and George M. Crouch, sales manager of the agency.

Remy Reports 1925 As Most Successful Year

CHICAGO, Feb. 6.—"The most successful year for Remy," was the way C. E. Wilson, general manager of the Remy division of General Motors expressed it in an after dinner talk made during show week before 60 executives and department heads of the Remy division. He was referring to the last year and expressing appreciation for the cooperation of those who had worked with him in the production of automotive electrical equipment.

The dinner was followed by a theatre party which concluded the one day automobile show trip given each year by this company to those employes whose work has been most effectual during the year.

Mr. Wilson's reference to a good year in 1925 is quite significant in view of the recent completion of a new addition to the Remy factory known as plant No. 4, the opening of which was celebrated Thursday, Jan. 28, at Anderson with a dinner at which many of the General Motors executives were present, among them A. P. Sloan, President, also Vice-Presidents Fred Fisher, J. L. Pratt and J. D. Mooney.

Present Willys-Derby Prizes

CHICAGO, Feb. 6.—Presentation of Willys-Derby prizes and an outline of policies for 1926 were features of a meeting of about 500 Willys-Overland and Willys-Knight dealers held yesterday at the La Salle. It was pointed out that with the addition of the Model 70, the sales organization has a complete line of cars to sell, with appeal for every taste and pocketbook. Among the speakers were L. G. Peed, sales manager, H. J. Leonard, new president of the F. B. Stearns Co., and R. M. Rowland and O. P. Kilbourn.

Cord Succeeds Farley As Head of Auburn Company

Election at Annual Meeting Puts R. H. Faulkner in Position of Vice-President

CHICAGO, Feb. 6.—Resignation of J. I. Farley as president of Auburn Automobile Company and election of E. L. Cord as his successor at the annual meeting of stockholders in Auburn, Ind., Tuesday were announced at a show-time luncheon meeting of Auburn dealers at the Blackstone Hotel. Mr. Cord had been serving as vice president and general manager.

Roy H. Faulkner who has been director of sales for the past three years, was elevated to the position vacated by Mr. Cord's promotion. L. B. Manning was elected treasurer and Raymond S. Pruitt, secretary.

It is declared Mr. Cord is the youngest president of a motor car manufacturing company in the United States. His age is 32. Only a comparatively few years ago he had his first taste of the automotive business, beginning with a car washing establishment in Los Angeles where he both washed and greased cars, himself, and where he capitalized a familiar slogan "Let Cord Wash Your Car." From Los Angeles he went to Phoenix, Arizona, as a Paige dealer, subsequently joining Quinlan Motor Company, Chicago distributors for Moon, as a salesman. Later he acquired an interest in Quinlin Motors and directed sales until 18 months ago when he went to Auburn as vice president and general manager.

Auburn held the best attended dealer meeting it has ever staged during a Chicago show. About 150 field representatives from the Chicago territory and more distant points were present. A glowing picture of outlook was painted by speakers, Mr. Faulkner stating the program contemplates production of 20,000 cars in 1926. Where 124 cars were sold in the Chicago territory in 1924, 1300 were sold last year.

Jordan Looks for Upward Trend of Motor Car Prices

NEW YORK, Feb. 6.—Sailing on the United Fruit Liner, Pastores, for a tropical cruise, Edward S. Jordan, president of the Jordan Motor Car Co., said that the trend of automobile prices in the immediate future should be up rather than down. The outlook for the automobile business generally is very favorable, he declared. The Jordan concern has no stocks at the factory and little, if any, with dealers. Despite efforts to keep pace with demand, Mr. Jordan expects a shortage in Jordan cars this spring.

Jordan has definitely abandoned the six-cylinder field. Mr. Jordan thinks that the public has become educated to demanding eight-cylinder cars.

Oakland-Pontiac Sets 1926 Goal at 160,000

Total of 546 Dealers, Distributors and Factory Officials Attend Show Dinner

CHICAGO, Feb. 6.—Oakland and Pontiac have set a selling goal of 160,000 cars in 1926—100,000 Pontiacs and 60,000 Oaklands. The drive was launched Tuesday at the Blackstone hotel where some 546 dealers, district managers and factory officials were on hand for a dinner and meeting.

President A. R. Glancy made a strong inspirational talk and promised to lead the dealers into "the promised land where they can get theirs." He outlined the progress which the Oakland has made in the selling field during 1925 and stressed the desire of the factory to cooperate with the dealers in order that 1926 may be a profitable year for them.

A talk also was made by C. W. Matheson, vice-president and director of sales, who stated that it is the policy of the company not to ship more cars to their dealers than they can sell, and he urged dealers to take inventory of their requirements in order that they may be well fortified with cars to meet the spring and summer demand.

Among the district managers present were: H. K. Mahaffee, Minneapolis, Edson Smith, Kansas City; Paul Stevenson, Dallas; W. H. Lowden, Memphis; C. L. Voss, St. Louis; E. B. Barlow, Indianapolis; H. Faust, Pontiac, Mich.; C. V. Potter, Denver; T. E. McManus, San Francisco; E. M. Lubeck, Chicago, with dealers from Wisconsin, Illinois, Southern Michigan and Missouri. President P. L. Knoedler of the Community Motor Sales Co., Chicago, also was on hand. The total representation of 546 compared with 350 a year ago.

Fuller Declares Stock Dividend

KALAMAZOO, Mich., Feb. 6.—Fuller and Sons Manufacturing Company has declared a stock dividend of 100 per cent, thereby increasing its capital from $250,000 to $500,000. This action was taken at the annual meeting held here. Directors were re-elected as follows: Frank D. Fuller, Lawrence W. Fuller, Walter P. Fuller, W. E. Upjohn and S. N. Bickerstaff. The officers, also renamed for the present year, are: President, F. D. Fuller; vice president, L. W. Fuller; secretary, Walter P. Fuller; treasurer, W. E. Upjohn; general manager, Fred Dowsett.

Firestone to Add Plant

AKRON, O., Feb. 6.—The Firestone Tire & Rubber Co. has just awarded a contract for construction of a fabric warehouse, adjacent to its No. 1 plant, which will cost between $175,000 and $200,000. It will be 120x150 feet, and four stories in height. This is the second large factory building to be started recently by Firestone. Construction of a warehouse for finished products is now nearing completion.

Wisconsin Hits Surety Plan

NEW YORK, Feb. 6.—The Studebaker car insurance plan has been held illegal in Wisconsin by Attorney General Herman L. Ekern of that state. He held that the money received by the Studebaker Finance Corp. was in part insurance money and that the Wisconsin law does not allow insurance to be written by other than an agent authorized by the state insurance department. On Mr. Ekern's ruling that Studebaker dealers cannot sell insurance unless licensed individually by the state, W. Stanley Smith, insurance commissioner, will refuse to allow the Home Insurance Co. to issue policies offered under the Studebaker plan. A representative of the Home Insurance Co. has gone to Madison, Wis., to take issue with the attorney general's opinion. He asserts that Mr. Ekern has not properly interpreted his own law and that Studebaker dealers are not solicitors of insurance and cannot be construed as insurance agents.

Holyoke Plans Show

HOLYOKE, Mass., Feb. 6.—The annual show of the Holyoke Automobile Dealers' Association will be given in a spacious show room to be opened in the enlarged building of the K. R. Charlton Co., Ford and Lincoln dealers, and the dates are Feb. 25, 26 and 27. Several departures from the lines of previous shows are promised.

Reuter Explains Olds Policies to Dealer Body

CHICAGO, Feb. 6.—The Western dealers' dinner of the Olds Motor Works was held Wednesday night at the LaSalle Hotel. In a brief address President I. J. Reuter explained the policies that have been worked out since he became the head of the company nearly a year ago, and assured the dealers that the production and inspection system now in effect guarantees them a uniformly excellent product.

He urged dealers to use good judgment in supplying themselves now with cars that they will need for spring sales. He stated that although business has held up unusually well this winter, prospect surveys made under the direction of the Olds Motor Works indicate that there will be a peak of spring demand within two or three months.

Production plans of the Olds company call for an output in 1926 double that in 1925, Mr. Reuter said.

The sales department under D. S. Eddins has worked out a comprehensive selling plan for Oldsmobile dealers, and dealers were urged to make use of the plans that will be sent to them from time to time. These plans were explained in more detail at an afternoon business meeting of the dealers.

New Orleans Dealers See Good Business by Spring

New and Used Car Business Begins to Show Much Promise by End of January

NEW ORLEANS, Feb. 6.—January was a variable month in this section, business proving better than the first month of the year usually shows in some branches of the automotive end but not so good in others, while radio distributors report it exceedingly good. Wholesalers of automobiles, however, look forward to the best year in the history of the business.

The market for both new and used cars has been a little under normal, even for January, due to unfavorable weather conditions and to the unsettled price situation, both of which are rapidly resolving into promising business for the months to come. In accessories the same is true, except in electric equipment, which was better than usual for January, though the last week of the month showed a perceptible slowing down.

In the distribution of replacement parts, business was not only improved over previous January sales, but was even better than in December and the final months of 1925. This shows, say dealers, that stocking up for good business to come is taking place generally.

Collections were about as usual for the first of the year. Some report them better than usual, while others see a tendency to postpone payments, attributed to year-end adjustments, overspending at Christmas, and probably excess care as to business requirements of coming months.

Graham Reports Good Business

CHICAGO, Feb. 6.—George M. Graham, vice-president of the Chandler Motor Car Co., reported that the last quarter of 1925, from a production standpoint, was the best in the history of his company, and that production during January has been going along at a healthy rate. No price changes were announced at the time of the Chicago show and none are planned for the immediate future. With respect to the price situation generally, Mr. Graham expressed the opinion that the trend is apt to be upward during 1926 as a result of the rising costs of materials.

German Show Announced

WASHINGTON, Feb. 6.—The automotive division of the commerce department has just received advertising literature in connection with the International Motor Car Show to be held in Frankfort, Germany from April 3 to 14. It is announced that interested firms may secure information regarding the cost of space and the rules governing this exhibit upon application to the division by referring to Exhibit No. 417.

Durant Announces Change In Star Car Distribution

Wholesale Offices in 21 Cities Now Take Place of Distributors, Campbell Explains

NEW YORK, Feb. 6.—Colin Campbell, vice-president of Durant Motors, Inc., has sent a letter to officials of finance companies throughout the United States stating that during the last 18 months the organization wholesaling the Star car has been entirely reformed, the sale of cars through distributors discontinued and wholesale offices opened at 21 strategically located points for the establishment of direct dealer representation.

These offices are located at Atlanta, Boston, Chicago, Cincinnati, Dallas, Denver, Des Moines, Elizabeth, Greensboro, Jacksonville, Kansas City, Lansing, Louisville, Memphis, Milwaukee, Minneapolis, Oklahoma City, Philadelphia, Pittsburgh, St. Louis and Washington. There are wholesale offices also at Oakland, Cal., and Toronto.

Mr. Campbell adds that there are now more than 3,000 Star dealers and more than 3,000 service stations throughout the country with material increases each week. Star sales, he says, increased monthly in 1925, over the same months of 1924, as follows:

April, 10 per cent; May, 74; June, 145; July, 150; August, 161; September, 80; October, 31 and December, 80.

Culbert Joins Marmon Dealer

SEATTLE, Feb. 6.—With 14 years of automobile selling experience behind him, Tommy Culbert has been appointed used car manager of the Cascade Automobile Company of Seattle, Marmon dealer. In 1908 Culbert started in the business in Spokane, Wash., coming to Seattle in 1915, where he has been active in automobile circles since. His specialty has been as dealer in used cars.

New Studebaker Dealers

CINCINNATI, Feb. 6.—The announcement is made by E. S. Gahagen Co., distributors for the Studebaker in southwestern Ohio, of sub agents to handle the line during the coming season as follows:

Harry Hanes, Arcanum; Moler Motor Co., Athens; W. O. Downing, Belle Center; Wiltshire's Garage, Chillicothe; J. R. Bookwalter, Clarksburg; H. E. Widdows, College Corner; Harry S. Fisher, Covington, Ky.; Ballard Sales Co., Dayton; Eaton Auto Sales Co., Eaton; Service Garage, Franklin; Rardin & Moore, Gallipolis; J. R. Bookwalter, Greenville; The E. S. Gahagen Co., Hamilton; E. S. Hearn, Harrison; A. W. Robinson, Hillsboro; Guthrie Auto Sales Co., Ironton; John Law and Son, Lebanon; Faires Garage, Logan; H. S. Freelan, Manchester; Studebaker Sales Co., Miamisburg; Lawson Central Garage, Nelsonville; Stanley E. Harris, New Vienna; Chris Eckhardt Sons Motor Co., Norwood; Philip Froikin, Osborne; C. K. Patterson, Piketon; The Hawn Myers Motor Co., Piqua; Hawn Myers Motor Co., Pleasant Hill; Weaver Auto Sales Co., Pomeroy; Scioto Motor Co., Portsmouth; St. Bernard Garage, St. Bernard; Automotive Supply Co., Sciotoville; G. H. Havenor, South Webster; The Burke Motor Co., Springfield; E. C. Hartman, Springfield; Hawn Myers Motor Co., Troy; George Miller, West Milton; E. L. Wallace, Wilmington and The Greene County Hardware Co., Zenia.

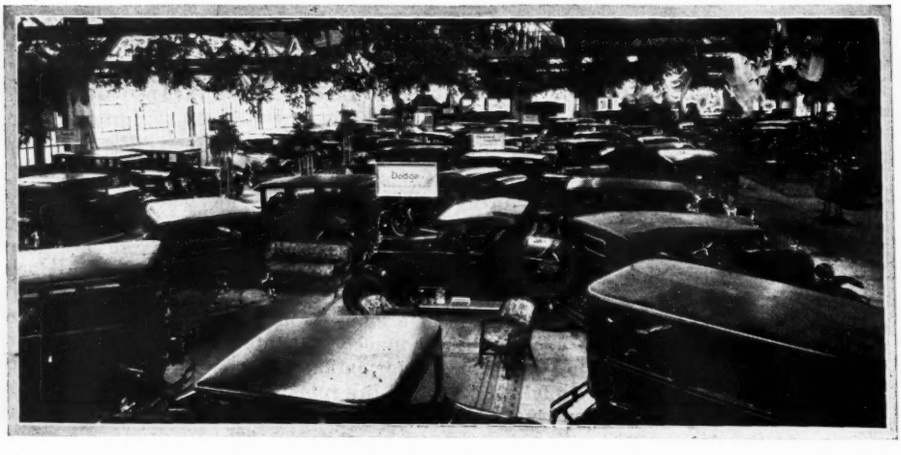
Has Used Car Carnival

ALTOONA, Pa., Feb. 6.—A used car carnival, which is the first event of its kind ever sponsored in this city, was opened to the public under the auspices of seven local automobile concerns, and will continue until the latter part of February. Upwards of 700 used cars are offered for sale at greatly reduced prices and results of the first week's efforts are reported to be very good.

Visits Mohawk Dealers

AKRON, Feb. 6.—J. F. Jones, general sales manager of the Mohawk Rubber Co., recently returned from a trip to the Pacific coast, where he visited all Mohawk branches and dealers. Prospects for spring and summer tire business were never better, he reports.

Interior of Youngstown Show



Oil Experts See Better Gas Only Upon Demand

Authorities Believe Better Fuel Will Be Found When Gasoline Costs Increase

LOS ANGELES, Feb. 6.—That as long as gasoline continues to sell at the prevailing scale of prices, the public will not demand, and the automotive industry will not create, any important improvements for more economical motor car operation from the fuel consumption standpoint, was the opinion expressed by several speakers at the sixth annual convention of the American Petroleum Institute held in Los Angeles. The convention drew an attendance of nearly 1,500 leaders of the oil industry from all parts of the country.

At the group meeting devoted to a study of motor fuel and motor lubrication, it was emphasized that there is an urgent demand for a seasonal change in gasoline specifications in order to correct the difficulty of starting in cold temperatures. Dr. H. C. Dickinson, representing the U. S. Bureau of Standards, presented several interesting exhibits which measured the starting qualities of various gasolines under varying temperatures.

Besides speaking on the "Effects of Fuel and Engine Design on Starting," Dr. Dickinson delivered a paper on the "Purchase of Lubricants on a Quality Basis," in which he declared there should be a more dependable and well-defined basis for readily assaying the value of lubricants. W. S. James, of the Associated Oil Company, Los Angeles, spoke to the group on "Testing Gasolines," and A. L. Clayden, of the Sun Oil Company, spoke on "Anti-Knock Gasolines and the High Compression Engine."

Paul Shoup, president of the Pacific Oil Company, and vice-president of the Southern Pacific Railway, in addressing the general session of the convention, declared that economy and efficiency in motor car operation will not be promoted until gasoline grows dearer in price.

Would Form Association

CHICAGO, Feb. 6.—A circular letter has been received in Chicago by a number of manufacturers' agents from George R. Keith, 661 Turk Street, San Francisco, a representative of automotive equipment ,accessories, tools, hardware and specialty manufacturers, asking that all manufacturers' agents interested in seeing formed an association of such agents, write him their views. According to the letter, the principal purposes of the proposed association would be to develop and crystallize certain standards of ethics and practices and to educate jobbers and manufacturers to co-operate with the properly functioning type of professional manufacturers' agents.

U. S. and Canada Exports $374,000,000 in 1925

Passenger Cars Alone Show Gain of 58 Per Cent Over 1924 Foreign Trade

WASHINGTON, Feb. 6.—The United States and Canada, during 1925, exported automotive products valued at approximately $374,000,000 which represents an increase in value of 48 per cent over the preceding year, it is announced here by I. H. Taylor, acting chief of the automotive division of the Department of Commerce. Including foreign assemblies of American cars, there were 557,425 automobiles exported from the United States during the year, representing an increase also of approximately 58 per cent over 1924.

The value of automotive exports during 1920, which held the record until now, due to high prices and inflated demand, was exceeded by over $70,000,000. Of the combined American exports, the United States accounted for over $334,000,000.

On the basis of this figure, automotive products in export trade for 1925 exceeded that of any other fabricated product, and their position as third among exported products of all kinds, being exceeded only by unmanufactured cotton, and refined mineral oils.

If certain other manufactured products kindred to the automobile or intended for motor vehicle equipment such as tractors, tires, storage batteries and magnetos were included, the total value of automotive exports would be very near $400,000,000.

Passenger cars are the largest item making up the 1925 record figure, followed by parts and accessories, including engines. The value of trucks and buses exported from the United States during the year gained about 96 per cent; the increase in the value of United States passenger car exports is also remarkable, there being a gain of 64 per cent over the preceding year.

Speigelberg with Gardner

BOSTON, Feb. 6.—Carl P. Speigelberg, for the last few years in charge of the Willys-Overland branch at St. Louis, and previously with its Boston branch, has joined the Connell & McKone Company as wholesale manager to travel the New England territory placing dealers for the Gardner line. He started his career here with the Metz Motor Company at Waltham.

Woodruff Distributes Auburn

BOSTON, Feb. 6.—A. W. Woodruff, who has been in the automotive industry since 1906 mostly in the west, has taken on the Auburn line as distributor for Metropolitan Boston. He is a Boston man, but went west and for five years was with the F. B. Stearns Company, then Lozier branch manager at Cleveland, and when Chandler started he was distributor for northern Ohio. For the last year he has been with the Auburn at the factory.

Brock Takes New Building

ST. LOUIS, Feb. 6.—A. J. Brock Motor Sales Co., Inc., Hudson and Essex dealer, has occupied a new building at 4437-39 Manchester avenue where it has sales and service quarters. The new building is about a block from the company's former location at 4360 Manchester which building it continues to occupy as a warehouse for new cars.

Moline to Hold Show

MOLINE, Ill., Feb. 6.—Moline's second annual automobile and accessory show will be held here February 18 to 21 inclusive under auspices of the Moline Automobile Dealers' Association. Closed car types will predominate in the displays to be shown by 12 or more exhibitors.

Morris Elected President Of 500 "Old Timers"

CHICAGO, Feb. 6.—Renewal of old acquaintances, good fellowship and a good time generally marked the annual banquet and frolic of old timers in the industry at the Congress Hotel Wednesday night. It was a get-together of members of the "500 Club," formerly known as the "Old Timers Club," whose show-time event is always one of the brilliant social affairs of the Chicago season.

The object of this organization primarily is to lay stress upon the sentimental and fraternal side of the industry. It was announced that the membership has attained the high tide mark of 500 with many applicants on the waiting list. Under present rules 500 is the limit, eligibility requiring 10 years experience in the industry.



William T. Morris

William T. Morris, vice president and general manager of the American Chain Company, was elected president for the ensuing year. He succeeds Vincent Bendix, head of the Bendix corporation who automatically takes a position on the board. Other members of the board are: Albert Champion, Champion Spark Plug Co.; Edward V. Rickenbacker, Rickenbacker Motor Co.; Harry P. Branstetter, Chicago Kissel distributor; Joseph H. McDuffee, Prest-O-Lite Company; James Levy, Chicago Buick dealer; Lloyd Maxwell, Williams and Cunningham advertising agency; Sid J. Black, Cleveland Automobile company. Mr. Branstetter is treasurer and Gregory Flynn secretary

January Car Sales Show Strength in Salt Lake

More Cash Business Observed But Used Automobile Situation Causes Some Trouble

SALT LAKE CITY, Feb. 6.—The automobile business for January showed strength and was ahead of the same month last year and of December in both cars and trucks. Light, medium and heavy cars are all selling, the light and medium machines maintaining their usual lead over those in the heavy class.

More cash sales are noted, though, of course, the business done as a whole is very far yet from being on a cash basis. Indeed, there is a tendency here as in other places to be more liberal in the matter of term payments.

The used-car situation might be described as fair. It is estimated that there are at this time about 1,000 used-machines on the market. The majority of the dealers say the open models are even more difficult to dispose of at a fair price than they were two or three months ago. Everybody wants a closed car and is unwilling to consider an open model unless the price is very low.

On the whole the automobile firms here are in good shape and a failure has not been recorded for sometime. The tendency toward the appointment of metropolitan dealers continues, but there is nothing so far in this connection that might be called an epidemic.

Earl Motors Plant Sold

JACKSON, Mich., Feb. 6.—The buildings and real estate of Earl Motors, Inc., have been sold to Robert L. Kennedy of this city on a bid of $300,000 at a Circuit Court sale. Mr. Kennedy represented the preferred creditors who included the Continental and Commercial Banks of Chicago and four Jackson banks. The sale was ordered by the court at the request of F. H. Shaw, receiver for the concern.

Moon Relations Closer

CHICAGO, Feb. 6.—The Moon Motor Car Co., through its new policy of maintaining branches at New York and Chicago will be brought into closer relations with its dealer organization, Stewart McDonald, president, told a gathering of dealers at the Palmer House. He announced an advertising appropriation of $1,000,000 to be spent in the large cities alone as one of the helps that the sales organization could expect for 1926. R. W. Judson, president, Continental Motors Corp., another speaker, told of improvements made in the Diana 8 motor as the result of experience gained in operating conditions. F. H. Rengers, sales manager of Moon, and H. C. Wendt, body engineer, were among the other speakers.

TRADE ASSOCIATION ACTIVITIES

KANSAS CITY HOLDS YEARLY MEET

Total Membership Now 135—New Officers of Body Initiated.

KANSAS CITY, Feb. 6.—The annual meeting of the Kansas City Auto Trades Association was held at the University Club with an attendance of 59 members and three visitors.

There were voted into the association 23 new members, making a total membership of 135. Forty of these have been added since Nov. 1, the date on which the new executive secretary, Orville Gault, began his work. A membership drive is now being held, which will continue three weeks, and is expected to add at least 30 additional members. The aim is to have 200 by the first of July.

One of the features of the annual meeting was the initiation of the new officers, as follows: President, George W. Arnold; vice-president, E. L. Minter; secretary, George Lockridge; treasurer, James Skidmore, and sergeant at arms, Howard Brown. The new board of directors consists of E. E. Dickinson, Don Hougland, V. E. Mott, William Phelps and William R. Knapp.

The report of the treasurer showed all bills paid, and the association in good shape to carry on its work aggressively. It was decided, however, that the association was not prepared financially to take space in the coming show, and make a drive there for publicity. It is hoped that this can be done next year.

Alabama Trade Elects Tucker

BIRMINGHAM, Feb. 6.—The semi-annual meeting of the Alabama Automotive Trades Association was held in Montgomery and Hayes Tucker of Tuscaloosa was elected president for the year 1926. This is the twenty-first meeting that the association has had and the president announced that it has been functioning successfully for more than ten years. The membership includes dealers, distributors, retail and wholesale accessories and supplies men.

The association is divided into nine parts and each part has a director. The divisions are: Ford cars, large cars, trucks, gas and oil, replacement parts, accessories jobbers, tires and accessories retail, battery and repair.

The secretary's report showed that during the year the association has added 83 members living in all parts of the state, that there have been 10 local associations formed in small towns throughout the state, that zone meetings have been held by he vice-presidents in the five zones and that the association is in fair financial condition.

The legislative committee submitted a constructive legislative program which the association adopted and pledged themselves to work for during the coming twelve months.

Secretary Jim Farley concluded the reading of his report by announcing with regret that he will not be able to serve the association during 1926 as he has made other business arrangements that will carry him out of the automobile field.

The following men were elected officers to serve during the present year: President, Hayes Tucker; other members of the committee, W. B. Smith of Birmingham, M. K. Johnson of Montgomery, E. W. Brownell of Birmingham, J. F. Stuckenberg of Montgomery, Charles E. Teas of Tuscaloosa was made secretary and L. D. Stephens of Montgomery, treasurer.

Directors: Ford division, S. E. Mary of Troy, Alabama; large car division, Harry L. Hooper of Selma; trucks, H. E. Bissell of Birmingham; gas and oil division, H. H. Gardner of Montgomery; replacement parts, G. E. Woodward of Birmingham; tires and accessories jobbers, A. H. Johnson of Montgomery; batteries, E. D. Henley of Birmingham; repair division, R. M. Hernandex of Birmingham.

Vice-presidents: North east districts, R. M. Wikle of Talladega; north west district, T. B. McCarty of Birmingham; central district, C. E. Ingalls of Montgomery; south east district, F. G. McQuagge of Dothan; south west district; H. Kittrell of Mobile.

S. A. E. HOLDS ANNUAL SESSION

Super-Charger Development Exclusive of Race Field Holds Interest

DETROIT, Feb. 6.—A lively debate about the relative merits and possibilities of the all-metal airship between Ralph H. Upson, Aircraft Development Corp., and Dr. Carl Arnstein, vice-president, Goodyear Zeppelin Co., was one of the outstanding features of the annual meeting of the Society of Automotive Engineers.

More than 700 members and guests of the society were in attendance.

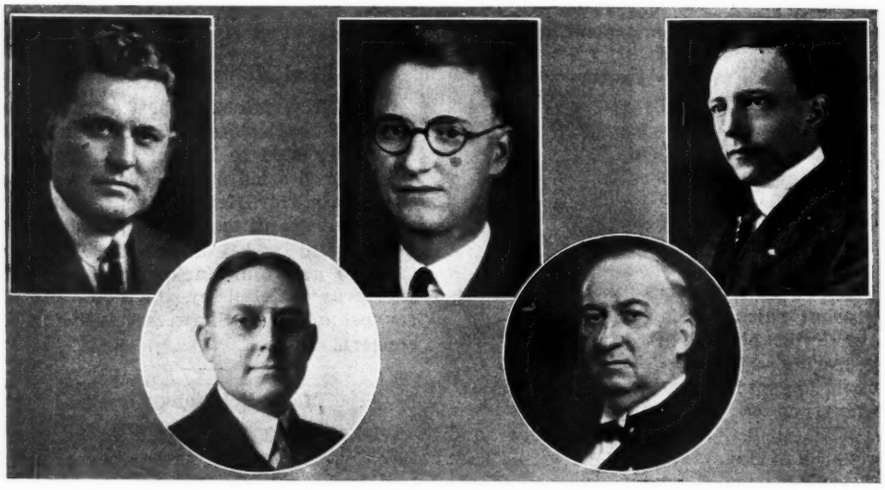
A general interest in super-charger development in connection with other than racing cars, presentation of new data concerning fuels for winter driving, and a statement by the retiring president H. L. Horning that "there will be no shortage of fuel as long as engineers and scientists live," were other developments of the sessions held on the two opening days.

In his inaugural address, President T. J. Litle, Jr., urged that every engineer coming into the industry serve his apprenticeship in the mechanical shops rather than come into the engineering department directly. He emphasized the need of practical knowledge of production requirements.

Discussing papers on super-charges, which were read by C. R. Short, General Motors Research Corp., Dr. S. A. Moss, General Electric Co., and C. W. Isler, General Motors Corp., Fred S. Duesenberg stated his belief that the real purpose of a super-charger is to break up the fuel better and increase efficiency of operation at low speeds, rather than to increase volumetric efficiency at high speeds and loads.

The ability of the amphibian plane to land and take off at places convenient to centers of population was one of the advantages urged for this type of plane by Grover C. Loeming in his paper on "The Development of Amphibian Airplanes."

McFarland Heads Indianapolis Trade



Top row, left to right: J. S. McFarland, president; Harry Sharp, secretary; A. W. Hutchinson, treasurer. Bottom row, left to right: R. H. Losey, vice-president, and John B. Orman, manager of Indianapolis Automobile Trade Association.

INDIANAPOLIS, Feb. 6.—The Indianapolis Automobile Trade Association at the first meeting of its new board of directors elected J. S. McFarland, president of the Lathrop McFarland Company, Oldsmobile distributor, president of the association for the next year to succeed Carl H. Waloerich. R. H. Losey, president of the Losey Nash Auto Company, Nash distributor, was elected vice-president; A. W. Hutchinson, president of the Hutchinson Auto Company, treasurer, and Harry Sharp of Wangelin-Sharp, Ford dealer, secretary.

The newly elected directors of the association are Ted Byrne, manager of the Citizens Motor Car Company, Packard distributor; A. M. Jones, of the Jones-Whitaker Sales Company, Chevrolet dealer, and Harry Sharp.

The meeting also took final action regarding the Indianapolis Show to be held February 15-20.

New Cars Selling Easily In Kansas City Section

Used Automobile Situation Also Improves Through Better Methods

KANSAS CITY, Feb. 6.—General business conditions in this territory are the best they have been for a number of years. Merchants report that the Christmas trade was better than any time since the slump after the war, and some of them are saying that the volume of sales was better than at the peak. The crops, livestock conditions and building activity have been such that there is general prosperity, and dealers in all lines are reporting that there is every reason for thinking that 1926 will be a banner year.

Collections are good, and repossessions are reduced to the minimum, averaging, it is said, less than 2 per cent.

New cars have had a good sale, both during the holiday season and since. Many cars were given as Christmas presents in this territory. Dealers are saying that the sales are not only better than last year, but that they anticipate an increase ranging from 25 per cent to 100 per cent during the first part of the year. Closed cars are leading in sales, and it is estimated that they will reach 75 per cent of the total sales.

Used cars are being handled this year better than last, the dealers having learned how to keep down the prices they pay, and how to better market them, with the result that the market is in a fairly satisfactory condition.

There has been an increase in the sales of accessories during January.

Velie Holds Luncheon

CHICAGO, Feb. 6.—A luncheon of the Velie Motors Corp., Moline Ill., was held Thursday at the Congress Hotel for all Velie dealers attending the Chicago show. C. W. Hadden, general sales manager of the company, was master of ceremonies. Other speakers included Edwin McEwen, general manager, W. G. Downey, advertising manager and H. C. Snow, chief engineer, R. J. Bell of the Velie-Bell Co., Chicago Velie distributor, was among the guests.

Cadillac "Old Timers" Dine

DETROIT, Feb. 6.—Cadillac Motor Car Company has just held its annual "old timers" dinner to which men and women who have been with the company for either five or ten years were invited. The men were presented with fobs and the women with rings bearing the Cadillac emblem—silver representing five years and gold ten years. There are in the Cadillac organization 1774 men and women who have been with the company for more than five years. Of this number, 581 have been with the company for more than ten years, 196 for 15 years, 43 for more than 20 years.

50,000 See Baltimore Show

BALTIMORE, Md., Feb. 6.—All previous records for attendance at an automobile show in this city were broken last week when more than 50,000 persons visited the display held at the Fifth Regiment Armory under the auspices of the Baltimore Automobile Trade Association, Inc. John E. Raine, the show manager, declared the event to be the best of the 20 shows held by the organization in that number of years. Many of the dealers reported numerous sales and the interest on the part of the public was greater than ever. Good results are expected to follow the display.

Lee Joins Franklin

SYRACUSE, N. Y., Feb. 6.—John W. Lee, Jr., formerly President of Overland-Syracuse Company and for many years president of Syracuse Automobile Dealers' Association, has joined the Franklin Automobile Company in the capacity of merchandising manager. Mr. Lee spent eleven years building up the Overland and Willys-Knight dealer organization in central New York and has taken a leading part also in working out automobile finance methods.

Detroit Employment Gains

DETROIT, Feb. 6.—Employment in the Detroit factories for the week ending January 29 totaled 261,602 or 843 more than for the preceding week, and 54,041 more than the corresponding week in 1925. Of the total, approximately 218,000 workers are employed in the automobile and accessory plants. This is considerably more than for the same week last year.

Alabama Reports January Business As Satisfactory

Replacement Parts and Accessory Dealers Particularly Are Highly Optimistic

BIRMINGHAM, Feb. 6.—January business has been very good throughout the state, according to the reports of the dealers who gathered for their semi-annual meeting here. The replacement parts and accessory dealers were particularly optimistic.

Tire dealers say that reports that the prices are now at the peak have caused business in this section to slow down slightly but they believe that this is strictly a temporary condition.

Dealers in small cars report that January business has been very satisfactory and they anticipate increasing spring business. The higher priced cars have been moving satisfactorily also, the dealers state, and they believe that business will be very much better as the weather gets warmer.

The used car market has been slightly sluggish according to all of the dealers. They believe that better business is on the way and will be felt in the next few weeks, however.

Joseph Leaves Goodrich

AKRON, Feb. 6.—John Joseph, formerly associated with the B. F. Goodrich Co., is now vice-president and general manager of the Cincinnati Rubber Manufacturing Co.

Coming Motor Events

Automobile Shows

Highland, Ill.	Feb. 12-14
Kansas City, Mo.	Feb. 13-20
Des Moines	Feb. 14-20
Indianapolis	Feb. 15-20
Louisville, Ky.	Feb. 15-20
Logan, W. Va.	Feb. 15-20
Peoria, Ill.	Feb. 15-26
Chattanooga, Tenn.	Feb. 15-20
Great Falls, Mont.	Feb. 16-20
Hartford, Conn.	Feb. 20-27
Grand Rapids, Mich.	Feb. 22-27
Omaha	Feb. 22-27
St. Louis	Feb. 22-27
Mankato, Minn.	Feb. 23-26
Johnstown, Pa.	Feb. 27-Mar. 6
Wilmington, Del.	Mar. 1-4
Boston	Mar. 6-12
Ft. Worth, Tex.	Mar. 6-14

Conventions

Illinois Automotive Trade Association, sixth annual Abraham Lincoln Hotel, Springfield, Ill., March 1-2.

North Carolina Automotive Trade Association, annual, Winston-Salem, N. C., March 17.

Texas Automotive Dealers' Association, Tenth annual, Galvez Hotel, Galveston, Tex., May 12-13.

Foreign Shows

London and Birmingham.....Feb. 16-26
(British Industries Fair of 1926).

Races

Miami, Florida	Feb. 22, 1926
Los Angeles, Cal.	Mar. 21, 1926
Fresno, Cal.	April 15, 1926
Atlantic City, N. J.	May 1, 1926
Charlotte, N. C.	May 10, 1926
Indianapolis, Ind.	May 31, 1926
Altoona, Pennsylvania	June 12, 1926
Laurel, Maryland	June 26, 1926
Salem, New Hampshire	July 5, 1926
Atlantic City, N. J.	July 17, 1926
Altoona, Pennsylvania	Sept. 6, 1926
Salem, New Hampshire	Sept. 25, 1926
Laurell, Maryland	Oct. 9, 1926
Atlantic City, N. J.	Oct. 23, 1926
Charlotte, N. C.	Nov. 11, 1926
Los Angeles, Cal.	Nov. 25, 1926

Coming Feature Issues of Chilton Class Journal Publications

February 18 — Automotive Industries — Statistical Issue.

Prices and Weights of Current Passenger Car Models

SHIP. WT.	PASS.	BODY STYLE.	PRICE
AJAX			
		108 in. W. B.	
2210	5-p	Touring	$865
2410	5-p	Sedan	995
APPERSON "6"			
3100	5-p	Phaeton	$1,575
3130	5-p	Sp. Phaeton	1,650
3145	4-p	Coupe	2,050
3570	5-p	Sp. Sedan	2,100
		"8T. 8"	
3520	5-p	Sp. Phaeton	1,995
3750	4-p	Coupe	2,450
3790	5-p	Sedan	2,595
AUBURN			
		"4-44"	
.....	5-p	Touring	$1,145
.....	5-p	Roadster	1,145
.....	.....	Coupe	1,175
.....	5-p	Sedan	1,195
		"6-66"	
2850	4-p	Sport-Roadster	1,395
2860	6-p	Touring	1,395
.....	3-p	Coupe	1,445
3020	5-p	Brougham	1,495
3070	5-p	Sedan	1,695
3070	.....	Wanderer	1,745
		"8-88"	
3180	4-p	Sport-Roadster	1,695
3200	6-p	Touring	1,695
.....	3-p	Coupe	1,745
3380	5-p	Brougham	1,795
3450	5-p	Sedan	1,995
3450	.....	Wanderer	2,045
3750	7-p	Sedan	2,095
BUICK "Standard"			
2845	2-p	Roadster	$1,125
2955	5-p	Touring	1,150
3020	2-p	Coupe	1,195
3150	5-p	2 d. Sedan	1,195
3110	4-p	Coupe	1,275
3230	5-p	4 d. Sedan	1,295
		"Master" (120 in. W. B.)	
3350	2-p	Roadster	1,250
3515	5-p	Touring	1,295
3670	5-p	2 d. Sedan	1,395
3765	5-p	Sedan	1,495
		(128 in. W. B.)	
3570	4-p	Sp. Roadster	1,495
3635	5-p	Sp. Touring	1,525
3805	4-p	Country Club	1,765
3855	4-p	Coupe	1,795
3940	5-p	Brough. Sedan	1,925
4025	7-p	Sedan	1,995
CADILLAC			
		"314" Standard Line (132 in. W. B.)	
4040	2-p	Coupe	$3,045
4155	5-p	Sedan	3,195
4240	7-p	Sedan	3,295
4075	5-p	Brougham	2,995
4360	7-p	Imperial	3,435
4115	4-p	Victoria	3,095
		Custom Built (132 in.)	
3920	3-p	Roadster	3,250
		(138 in. W. B.)	
4300	7-p	Touring	3,250
3960	5-p	Phaeton	3,250
4190	5-p	Coupe	4,000
4190	5-p	Sedan	4,150
4250	7-p	Suburban	4,285
4355	7-p	Imperial	4,485
CASE			
		J. I. C.	
3260	3-p	Roadster	$1,840
3290	5-p	Touring	1,885
3470	5-p	Sp. Touring	2,160
3640	5-p	Sedan	2,590
3650	5-p	Brougham	2,590
		"Y"	
3950	7-p	Touring	2,225
4320	7-p	Sedan	2,975
CHANDLER "35"			
3090	2-p	Roadster	$1,695
3085	5-p	Sport Touring	1,545
3233	7-p	Touring	1,645
3309	5-p	Brougham	1,695
3525	5-p	Met. Sedan	1,895
3498	5-p	20th C'y Sedan	1,590
3594	7-p	Sedan	1,995
CHEVROLET "Superior" (Series K)			
1780	2-p	Roadster	$510
1875	5-p	Touring	510
2030	2-p	Utility Coupe	645
2130	5-p	Coach	645
2215	5-p	Sedan	735
.....	5-p	Landau Sedan	765
CHRYSLER "FOUR" (109 in. W. B).			
.....	2-p	Roadster	$890
2300	5-p	Touring	845
2405	2-p	Club Coupe	895
2510	5-p	Coach	935
2570	5-p	Std. Sedan	995

SHIP. WT.	PASS.	BODY STYLE.	PRICE
CHRYSLER (Continued) "Six" (113¾ in. W. B.)			
2805	4-p	Roadster	$1,625
2785	5-p	Phaeton	1,395
2895	5-p	Coach	1,445
2935	4-p	Coupe	1,795
2995	5-p	Brougham	1,865
3060	5-p	Sedan	1,695
3085	5-p	Imperial Sedan	1,995
3090	5-p	Crown Sedan	2,095
		Imperial (120 in. W. B.)	
.....	4-p	Roadster	2,885
.....	5-p	Phaeton	2,645
.....	5-p	Sedan	3,395
		(127 in. W. B.)	
.....	4-p	Coupe	3,195
.....	7-p	Sedan	3,595
.....	7-p	Sedan Lim.	3,695
CLEVELAND "31"			
2415	5-p	Touring	$945
2565	5-p	Tour'g DeLuxe	1,025
2520	3-p	Coupe	1,035
2695	5-p	Sedan	1,090
		"43"	
2775	5-p	Touring	1,145
2890	3-p	Coupe	1,225
2950	5-p	Sp. Touring	1,295
3120	5-p	Sedan	1,345
3190	5-p	Sedan DeLuxe	1,595
3190	5-p	Sport Sedan	1,625
CUNNINGHAM "V-6"			
4600	7-p	Touring	$6,650
4500	4-p	Sp. Touring	6,150
4700	4-p	Coupe	7,600
5000	6-p	Limousine	8,100
DAGMAR "6-70"			
3750	4-p	Roadster	$3,500
3800	4-p	Sp. Tourer	3,500
3700	4-p	Phaeton	3,500
4200	4-p	Petite Coupe	4,500
4200	5-p	Petite Sedan	2,540
4500	4-p	De Luxe Coupe	4,750
4700	5-p	Sedan	4,700
4800	7-p	Sedan	4,750
		"6-60"	
3100	2-p	Roadster	1,985
3200	4-p	Sp. Touring	1,985
3150	5-p	Touring	1,785
3500	5-p	Sedan	2,445
DAVIS "92"			
2660	4-p	Roadster	$1,495
2915	5-p	Legion. Tour.	1,495
3000	5-p	Sedan	1,595
3060	5-p	Imperial Sedan	1,795
		"93"	
.....	5-p	Touring	$1,285
2635	5-p	Sedan	1,285
.....	5-p	Touring	1,285
DIANA "St. 8"			
2995	5-p	Roadster	$1,695
3100	5-p	Phaeton	1,695
3275	5-p	Std. Sedan 4d.	1,995
3275	5-p	De Luxe Sedan	1,995
3160	5-p	Cabriolet	1,995
3170	5-p	Sedan De Luxe	2,095
3640	7-p	Sedan (135 in. W. B.)	2,695
DODGE BROTHERS			
2473	2-p	Roadster	$ 795
2593	2-p	Special Roadster	845
2567	5-p	Touring	795
2695	5-p	Spec. Touring	845
2708	2-p	Coupe "B"	845
2823	2-p	Spec. Coupe "B"	895
2995	5-p	"B" Sedan	895
3077	5-p	Spec. "B" Sed.	945
3107	5-p	Spec. "A" Sed.	1,075
DUESENBERG Straight "8"			
3920	2-p	Roadster	†
3970	4-p	Roadster	†
3700	5-p	Phaeton	$6,650
3980	4-p	Sp. Phaeton	†
4115	5-p	Sedan	†
4500	7-p	Sedan	†

†Manufacturers do not quote list prices.

SHIP. WT.	PASS.	BODY STYLE.	PRICE
DU PONT "D"			
3300	2-p	Roadster	$2,600
3550	5-p	Touring	2,600
3800	7-p	Touring	2,750
3550	5-p	Touring Sedan	3,400
DURANT A-22			
2300	5-p	Touring	$ 730
2380	5-p	Spec. Touring	805
2450	4-p	Coupe	825
2480	4-p	Spec. Coupe	875
2650	5-p	Sedan	880
2710	5-p	Spec. Sedan	995
ELCAR "4-55"			
2560	5-p	Touring	$1,095
.....	4-p	Roadster	1,295
2900	5-p	Coach	1,195
.....	3-p	Coupe	1,295
2779	5-p	Sedan	1,395
		"6-65"	
.....	5-p	Touring	1,295
.....	4-p	Roadster	1,495
2779	5-p	Coach	1,395
.....	3-p	Coupe	1,495
2900	5-p	Sedan	1,595
		"8-81"	
.....	4-p	Roadster	2,315
.....	7-p	Touring	2,265
3000	3-p	Coupe Road.	2,195
.....	4-p	Coupe	2,095
.....	5-p	Sedan	2,265
4050	7-p	Sedan	2,765
ESSEX			
2185	5-p	Touring	$765
2395	5-p	Coach	765
FLINT "80"			
3325	4-p	Sport Road.	$1,945
3245	5-p	Touring	1,595
3310	4-p	Sp. Touring	1,945
3245	4-p	Coupe	2,045
3595	5-p	Sedan	2,195
.....	7-p	Sedan	2,395
		"60"	
.....	4-p	Roadster	1,395
2715	5-p	Touring	1,285
.....	4-p	Coupe Roadster	1,495
2940	5-p	Sedan 4d.	1,525
2965	5-p	Brougham	1,575
		"Jr. 6"	
.....	5-p	Coach	1,085
.....	5-p	DeL. Coach	1,185
FORD			
Without Starter and Dem. Rims			
1526	2-p	Runabout	$360
1557		*With Balloon Tires*	395
1607	5-p	Touring	390
1640		*With Balloon Tires*	335
With Starter and Dem. Rims			
1645	2-p	Runabout	345
1655		*With Balloon Tires*	305
1728	5-p	Touring	375
1738		*With Balloon Tires*	400
1851	2-p	Coupe	520
1860		*With Balloon Tires*	545
1961	5-p	Sedan, Tudor	580
1972		*With Balloon Tires*	605
1994	5-p	Sedan, Fordor	660
2004		*With Balloon Tires*	685
FRANKLIN "11-A"			
2800	3-p	Sport Road.	$2,750
2845	5-p	Touring	2,635
2965	3-p	Coupe	2,700
3175	5-p	Sedan	3,090
2900	2-p	Sp. Coupe	3,150
3030	5-p	Sport Sedan	3,225
3275	7-p	Limousine	3,275
3135	5-p	Cabriolet	4,400
.....	5-p	Oxford Sedan	3,172
GARDNER "6-A"			
3150	5-p	Touring	$1,395
3160	4-p	Sp. Roadster	1,295
3440	5-p	Brougham	1,545
3440	5-p	Std. Sedan	1,595
		"8-A"	
3520	5-p	Touring	1,795
3480	4-p	Sp. Roadster	1,795
3740	5-p	Brougham	1,895
3580	4-p	Cabriolet	2,095
3730	5-p	Std. Sedan	2,095
GRAY "S"			
2055	5-p	Sedan	$845
HERTZ "D-1"			
3410	5-p	Touring	$1,495
3360	5-p	Sedan	1,795
HUDSON "Super Six"			
3400	7-p	Phaeton	$1,200
3385	5-p	Coach	1,165
3425	4-p	Brougham 4d.	1,450
3675	7-p	Sedan	1,650
HUPMOBILE "A"			
2620	5-p	Touring	$1,325
2800	5-p	Sedan	1,385
		"E-1"	
3135	5-p	Touring	1,945
3295	2-p	Coupe	2,345
3295	4-p	Coupe	2,345
3410	5-p	Sedan	2,345
.....	7-p	Berline	2,445

SHIP. WT.	PASS.	BODY STYLE.	PRICE
JEWETT "New Day"			
.....	5-p	Touring	$1,095
.....	5-p	Sedan	995
.....	5-p	Sedan de Luxe	1,095
JORDAN "J"			
.....	4-p	Playboy Road.	$1,695
.....	5-p	Sedan	1,845
		Series "A"	
3340	5-p	Touring	2,275
3625	5-p	Brougham	2,575
3525	5-p	Sedan	2,675
3470	7-p	Sedan	2,925
KISSEL "55"			
3130	2-p	Speedster	$1,795
.....	2-p	Sp'dster DeL.	2,085
.....	4-p	Speedster	1,895
.....	4-p	Sp'dster DeL.	2,185
3530	2-p	Enc. Speedster	2,085
.....	4-p	Enc. Speedster	2,185
.....	4-p	Enc. Spd. DeL.	2,685
.....	2-p	Enc. Spd. DeL.	2,585
3190	4-p	Tourster	1,795
.....	4-p	Tourster DeL.	1,985
2980	5-p	Phaeton	1,585
3170	5-p	Phaeton DeL.	1,785
.....	7-p	Touring	1,685
.....	7-p	Touring DeL.	1,885
.....	.....	Coupe Roadster	1,695
3430	4-p	Coupe	2,085
.....	4-p	Coupe DeL.	2,485
3540	5-p	Broug. Sedan	1,995
.....	5-p	Brg. Sed. DeL.	2,485
.....	5-p	Brougham 2d.	1,695
4070	7-p	Sedan De Luxe	3,085
4010	7-p	Ber. Sed. DeL.	3,185
3530	5-p	Victoria	2,185
.....	5-p	Victoria DeL.	2,485
		"75"	
.....	2-p	Speedster	2,195
.....	2-p	Speedster DeL.	2,485
.....	4-p	Speedster	2,295
.....	4-p	Speedster DeL.	2,585
.....	2-p	Enc. Speedster	2,485
.....	2-p	Enc. Spd. DeL.	2,985
.....	4-p	Tourster	2,195
.....	4-p	Enc. Speedster	2,585
.....	4-p	Enc. Spd. DeL.	3,085
.....	4-p	Tourster DeL.	2,385
.....	5-p	Phaeton	1,985
.....	5-p	Phaeton DeL.	2,185
.....	7-p	Touring	2,085
.....	7-p	Touring DeL.	2,285
.....	.....	Coupe Roadster	2,095
.....	4-p	Coupe	2,485
.....	4-p	Coupe De Luxe	2,385
.....	5-p	Broug. Sedan	2,395
.....	5-p	Brg. Sed. DeL.	2,985
.....	5-p	Brougham 2d.	2,095
.....	7-p	Sedan De Luxe	3,485
.....	7-p	Berl. Sed. DeL.	3,585
.....	7-p	Victoria	2,585
.....	7-p	Victoria DeL.	2,885
LEXINGTON "6-50"			
2950	3-p	Roadster	$1,895
2850	5-p	Touring	1,895
3425	5-p	Sedan	2,245
3425	5-p	Landau Sedan	2,245
3400	5-p	Landaulet	on appl.
LINCOLN			
4460	2-p	Roadster	$4,000
4530	7-p	Touring	4,000
4565	4-p	Phaeton	4,000
4740	4-p	Sport Phaeton	4,900
4750	4-p	Coupe	4,600
4835	4-p	Sedan	4,300
4760	5-p	Sedan	4,900
4890	7-p	Sedan	5,100
4945	7-p	Limousine	5,300
LOCOMOBILE "48"			
5230	4-p	Sportif Tour.	$7,460
5330	7-p	Touring	7,460
5630	5-p	Victoria Sedan	10,050
5464	7-p	Brougham	10,040
5640	7-p	Touring Lim.	9,500
5868	7-p	Enc. Dr. Lim.	10,050
5600	7-p	Cabriolet	10,300
		"Jr.-8"	
3100	2-p	Roadster	2,150
3000	5-p	Touring	1,785
3250	4-p	Coupe	2,265
3400	5-p	Sedan	2,235
3350	5-p	Brougham	2,285
		"90"	
.....	4-p	Sportif Tour.	5,500
.....	4-p	Roadster	5,900
.....	4-p	Coupe	6,950
.....	5-p	Victoria Sedan	7,300
.....	5-p	Sed. (divided)	7,450
.....	7-p	Cabriolet	7,500
.....	7-p	Limousine	7,500
.....	6-p	Brougham	7,500
McFARLAN "6" "SV"			
3700	2-p	Roadster	$2,650
.....	2-p	Spec. Roadster	2,900
3600	5-p	Touring	2,650
.....	7-p	Touring	2,750

Prices and Weights of Current Passenger Car Models

SHIP. WT.	PASS.	BODY STYLE.	PRICE
McFARLAN "6" (Continued)			
		"SV"	
3850	4-p	Coupe	3,180
3850	5-p	Sedan	3,180
.....	5-p	Spec. Sedan	3,180
3850	7-p	Sedan	3,280
.....	5-p	Sub. Sedan	3,380
.....	7-p	Sub. Sedan	3,480
.....	5-p	Brougham 4d.	3,180
		"TV"	
4000	2-p	Roadster	5,400
4600	4-p	Sp. Touring	5,600
4900	4-p	Coupe	6,720
5200	4-p	Tour. Sedan	6,720
5200	7-p	Tour. Sedan	6,810
.....	6-p	Sedan	6,720
.....	7-p	Sedan	6,810
.....	7-p	Spec. Sedan	6,810
.....	7-p	Enc. Sedan	7,110
.....	7-p	Sub. Sedan	7,110
5200	7-p	Town Car	9,000
		"Straight 8"	
.....	2-p	Roadster	2,650
.....	4-p	Roadster	2,900
.....	5-p	Touring	2,650
.....	7-p	Touring	2,750
.....	5-p	Sedan	3,180
.....	5-p	Sub. Sedan	3,380
.....	7-p	Sedan	3,280
.....	7-p	Sub. Sedan	3,480
.....	4-p	Coupe	3,180
.....	5-p	Coach Broug.	3,180
.....	5-p	Town Car	4,600
MARMON			
		"74"	
3695	2-p	Roadster	$3,295
3604	5-p	Phaeton	3,295
3704	7-p	Touring	3,295
3799	5-p	Broug. Coupe	3,295
3754	4-p	Victoria Coupe	3,295
3616	2-p	Std. Coupe	3,295
3869	5-p	Sedan	3,295
3859	5-p	Sedan De Luxe	3,775
3999	7-p	Sedan	3,370
3974	7-p	Sedan De Luxe	3,850
3969	5-p	Sedan Lim.	3,900
3999	7-p	Sedan Lim.	3,975
MOON			
		Series "A"	
2600	5-p	Roadster	$1,395
2770	5-p	Cab. Roadster	1,545
2560	5-p	Touring	1,195
2850	5-p	Coach	1,295
2710	5-p	DeL. Sedan 2d.	1,495
2860	5-p	Std. Sedan 4d.	1,445
2710	5-p	DeL. Sedan 4d.	1,595
		London	
3270	5-p	Sp. Touring	1,985
3290	7-p	Touring	1,985
3590	5-p	Petite Sedan	2,540
NASH			
		"Special"	
2870	2-p	Roadster	$1,115
2980	5-p	Touring	1,135
3030	2-p	Business Coupe	1,165
3120	5-p	Sedan 2d.	1,215
.....	5-p	Sedan	1,315
3300	5-p	Sedan 4d.	1,445
		"Advanced"	
		(121 in. W. B.)	
3320	3-p	Roadster	1,375
3400	5-p	Touring	1,340
3550	5-p	Sedan 2 d.	1,425
		"Advanced"	
		(127 in. W. B.)	
3480	7-p	Touring	1,490
3640	4-p	Victoria	1,790
3750	5-p	Coupe 4 d.	1,990
3830	7-p	Sedan	2,090
OAKLAND			
		"6"	
2425	2-p	Roadster	$975
2500	5-p	Touring	1,025
.....	4-p	Sp. Roadster	1,175
2640	5-p	Coach	1,095
2615	3-p	Landau Coupe	1,125
2765	5-p	Sedan	1,195
2885	5-p	Landau Sedan	1,295
OLDSMOBILE			
		"30"	
2235	5-p	Touring	$875
.....	4-p	DeL. Roadster	975
2445	5-p	Sp. Touring	930
.....	2-p	Coupe	925
2460	5-p	Coach	950
.....	2-p	De Luxe Coupe	990
2660	5-p	De Luxe Coach	1,040
2535	5-p	Sedan	1,025
2735	5-p	De Luxe Sedan	1,115
OVERLAND			
		"91" 4	
		(100 in. W. B.)	
1919	5-p	Touring	$495
OVERLAND (Continued)			
2205	5-p	Sedan De Luxe	695
2202	5-p	Std. Sedan 2 d.	595
		"93" 6	
		(112¾ in. W. B.)	
.....	5-p	Touring	895
2443	5-p	Std. Sedan	895
2584	5-p	Sedan De Luxe	1,095
PACKARD			
		"6"	
		(126 in. W. B.)	
3643	4-p	Roadster	$2,785
3653	5-p	Touring	2,585
3595	4-p	Sp. Touring	2,750
3753	4-p	Coupe	2,585
3937	5-p	Sedan	2,585
		(133 in. W. B.)	
3793	7-p	Touring	2,785
4043	7-p	Sedan	2,785
.....	5-p	Club Sedan	2,725
4133	7-p	Sedan Lim.	2,885
		"8"	
		(136 in. W. B.)	
4060	4-p	Runabout	3,950
4090	5-p	Touring	3,750
4023	4-p	Sp. Touring	3,900
4242	4-p	Coupe	4,650
4528	5-p	Sedan	4,750
.....	2-p	Coupe	5,775
		(143 in. W. B.)	
4199	7-p	Touring	3,950
.....	5-p	Club Sedan	4,890
4655	7-p	Sedan	5,000
4710	7-p	Sedan Lim.	5,100
PAIGE			
		"24-26"	
.....	7-p	Touring	$1,995
.....	5-p	Std. Sedan	1,495
.....	5-p	Sedan De Luxe	1,670
.....	7-p	Sedan	1,995
.....	7-p	Limousine	.....
PEERLESS			
		"6-72"	
		(126 in. W. B.)	
3175	5-p	Touring	$1,895
3425	5-p	Coupe	2,295
3500	5-p	Sedan	2,395
		(133 in. W. B.)	
3275	2-p	Sp. Roadster	2,195
3300	7-p	Touring	1,995
3700	7-p	Sedan	2,595
3825	7-p	Limousine	2,695
		"6-80"	
		(116 in. W. B.)	
.....	5-p	Sedan	$1,495
3150	5-p	Std. Sedan	1,595
		"8-69"	
		(133½ in. W. B.)	
.....	.....	Roadster	$2,995
.....	5-p	Sedan	3,495
.....	7-p	Sedan	3,595
.....	7-p	Berl. Limousine	.....
PIERCE-ARROW			
		"33"	
4350	2-p	Runabout	$5,250
4500	4-p	Touring	5,250
4590	7-p	Touring	5,250
4730	3-p	Coupe	6,800
4800	4-p	Sedan	6,900
4960	7-p	Sedan	7,000
4750	4-p	Coupe Sedan	6,900
4730	6-p	Brougham	6,800
4850	7-p	Limousine	7,000
5060	7-p	Enclosed Lim.	7,000
4780	7-p	French Lim.	7,000
4730	6-p	Landaulet	7,000
		"80"	
3205	2-p	Roadster	2,895
3260	4-p	Phaeton	3,095
3385	7-p	Phaeton	2,895
3430	5-p	Coach	3,150
3365	4-p	Coupe Landau	3,820
3335	4-p	Coupe	3,695
3440	5-p	Sedan	3,895
3560	7-p	Sedan	3,995
3615	7-p	Enc. Dr. Lim.	4,045
PONTIAC			
		(110 in. W. B.)	
2320	2-p	Coupe	$ 825
2400	5-p	Coach	825
REO			
		"T-6"	
3350	2-p	Roadster	$1,665
3182	5-p	Sp. Touring	1,395
3250	2-p	Coupe	1,495
3250	2-p	Spec. Coupe	1,565
3400	5-p	Sedan 4 d.	1,565
3400	5-p	Spec. Sedan	1,745
REVERE			
		"25"	
3900	2-p	Sp. Roadster	$2,750
3975	4-p	Speedster	2,750
4050	5-p	Touring	2,750
4300	5-p	Sedan	3,800
REVERE (Continued)			
		"M"	
3700	2-p	Roadster	3,200
3800	4-p	Sportster	3,200
3970	5-p	Touring	3,200
4400	5-p	Sedan	4,000
RICKENBACKER			
		"E"	
		(117 in. W. B.)	
.....	5-p	Touring	$1,750
.....	7-p	Touring	1,795
.....	4-p	Roadster	1,795
3116	5-p	Coupe-Sedan	1,695
3202	5-p	Brougham	1,895
.....	4-p	Coupe Roadster	1,920
3040	4-p	Coupe DeLuxe	1,995
3317	5-p	Sedan	2,095
.....	7-p	Sedan	2,195
		"B-8"	
		(121½ in. W. B.)	
.....	4-p	Roadster	2,195
.....	5-p	Touring	2,150
.....	7-p	Touring	2,195
.....	4-p	Sup. Sp. Roadster	3,250
.....	5-p	Coupe Sedan	2,095
3486	5-p	Brougham	2,295
.....	4-p	Coupe Roadster	2,320
3440	4-p	Coupe DeLuxe	2,395
.....	5-p	Sedan	2,495
.....	7-p	Sedan	2,595
.....	4-p	Sup. Sp. Sedan	5,000
ROAMER			
		"6-50-55" (115 in. W. B.)	
.....	5-p	Spec. Tourer	1,295
.....	5-p	Spec. Sp. Tourer	1,395
.....	2-p	Bus. Coupe	1,395
.....	5-p	Coupe	1,395
.....	5-p	Sedan DeLuxe	1,695
		"6-54-E" (118-138 in. W. B.)	
.....	4-p	Roadster	2,385
.....	4-p	Tourer	1,985
.....	4-p	Sport	2,285
.....	7-p	Tourer	2,285
.....	3-p	Cabriolet	2,750
.....	5-p	Sedan	2,950
		"4-75-E" (128 in. W. B.)	
		"Custom Built"	
.....	2-p	Speedster	3,485
.....	3-p	Sport	3,285
.....	4-p	Tourer	2,985
		"8-88" (138 in. W. B.)	
.....	4-p	Roadster	2,750
.....	5-p	Sport	2,750
.....	5-p	Tourer	2,495
.....	7-p	Tourer	2,585
.....	2-p	Speedster	2,985
.....	5-p	Sedan	1,995
.....	3-p	Cabriolet	2,950
.....	5-p	Spec. Sedan	3,485
.....	7-p	Sedan (136-in. W. B.)	3,285
.....	5-p	Brougham	2,895
ROLLS-ROYCE			
.....		Chassis	††

†† Manufacturers do not quote list prices.

SHIP. WT.	PASS.	BODY STYLE.	PRICE
STANLEY			
		"252"	
3400	5-p	Phaeton	$2,500
3800	5-p	Sedan	3,300
STAR			
		"4"	
.....	2-p	Roadster	525
.....	5-p	Touring	525
.....	2-p	Coupster	610
.....	5-p	Coach	695
.....	5-p	Sedan 4 d.	795
		Standard "6"	
.....	5-p	Touring	695
.....	2-p	Coupster	745
.....	2-p	Coupe	820
.....	5-p	Coach	880
.....	5-p	Landau Sedan	975
STEARNS-KNIGHT			
		"B" (4)	
.....	4-p	Coupe R'dster	$1,795
3775	5-p	Touring	1,595
4250	5-p	Sedan	2,095
3750	4-p	Coupe Br'ham	1,995
.....	5-p	Brougham	2,095
		"S" (6)	
.....	2-p	Roadster	2,395
3775	5-p	Touring	2,395
3850	7-p	Touring	2,495
4025	2-p	Coupe	3,395
.....	5-p	Brougham	2,750
4275	4-p	Sp. Coupe	2,850
3950	5-p	Sedan	2,750
4275	7-p	Sedan	3,150
.....	4-p	Sp. Sedan	3,050
		"C" (6)	
3525	4-p	Touring	1,875
3540	5-p	Touring	1,875
3550	2-p	Sport Coupe	2,185
3650	5-p	Coupe Br'ham	2,350
3700	5-p	Sedan	2,475
3700	4-p	Brougham	2,475
STEVENS-DURYEA			
5300	2-p	Roadster	$8,150
5500	7-p	Touring	7,500
5425	4-p	Sp. Touring	7,750
5600	4-p	Coupe	9,000
5730	4-p	Sedan	10,000
5850	6-p	Sedan	9,675
5750	6-p	Town Brough.	10,175
6100	6-p	Vestibule Lim.	9,675
6210	7-p	Vestibule Lim.	10,175
6150	7-p	¾ Limousine	10,175
6200	7-p	Cabriolet	10,175
STUDEBAKER			
		Standard Six	
2760	3-p	Du. Roadster	$1,125
2810	3-p	Sport Roadster	1,295
2870	5-p	Du. Phaeton	1,145
2945	3-p	Country Club	1,295
2980	5-p	Coach	1,195
3260	5-p	Sedan	1,295
3260	5-p	Sedan	1,395
		Special Six	
3380	3-p	Du. Roadster	1,395
3500	4-p	Sp. Roadster	1,595
3495	5-p	Du. Phaeton	1,445
3685	4-p	Victoria	1,750
3710	5-p	Brougham	1,695
3520	5-p	Coach	1,445
3875	5-p	Sedan	1,895
		Big Six	
		(127 in. W. B.)	
3785	7-p	Du. Phaeton	1,775
4030	5-p	Coupe	2,045
4030	5-p	Brougham 4 d.	2,095
4050	7-p	Sedan	2,145
4200	7-p	Berline	2,225
		(120 in. W. B.)	
3320	3-p	Du. Roadster	1,495
3425	4-p	Sport Roadster	1,645
3505	5-p	Sport Phaeton	1,575
3750	5-p	Club Coupe	1,650
3760	5-p	Sedan	1,895
STUTZ			
		"A-A"	
.....	2-p	Speedster	$2,995
.....	4-p	Speedster	2,995
.....	5-p	Brougham	2,995
.....	5-p	Sedan	2,995
.....	4-p	Vic. Coupe	2,995
.....	2-p	Coupe	2,995
VELIE			
		"60"	
3030	4-p	Sp.Roadster	$1,495
3025	5-p	Club Phaeton	1,450
3150	3-p	Coupe	1,450
3340	5-p	Royal Sedan	1,750
3005	5-p	Brougham	1,425
.....	.....	De Luxe Sedan	2,150
WILLS SAINTE CLAIRE			
		"B-68"	
		(127 in. W. B.)	
3500	7-p	Phaeton	$2,885
3495	4-p	Coupe	3,785
3520	5-p	Sedan	3,885
3635	7-p	Sedan	3,900
3570	5-p	Brougham 4 d.	3,900
3710	7-p	Limousine	4,085
.....	7-p	Town Car	5,500
		"C-68"	
		(Custom Built 127 in. W. B.)	
3350	4-p	Roadster	3,300
3500	4-p	Cab. Roadster	3,785
3450	5-p	Gray G. Trav.	3,300
3520	5-p	Sedan	4,085
3635	7-p	Sedan	4,100
3570	5-p	Brougham	4,100
3710	7-p	Limousine	4,285
		"W-6" (127 in. W. B.)	
3410	4-p	Roadster	2,800
3550	5-p	Gray G. Trav.	2,800
3580	4-p	Cab. Roadster	3,285
3630	5-p	Brougham	3,185
3680	5-p	Sedan	3,185
3775	7-p	Sedan	3,285
3835	7-p	Limousine	3,385
		"T-6" (127-in. W. B.)	
3500	5-p	Traveler	3,000
3500	4-p	Roadster	3,000
3750	4-p	Cab. Roadster	3,650
3900	5-p	Sedan	3,650
.....	7-p	Sedan	3,750
.....	7-p	Limousine	3,850
3920	5-p	Brougham	3,750
3810	5-p	Spec. Sedan	3,750
WILLYS-KNIGHT			
		"66"	
3323	2-p	Roadster	1,750
3395	5-p	Touring	1,750
3566	7-p	Touring	1,950
3582	5-p	Coupe Sedan	2,095
3672	5-p	Brougham	2,095
3664	4-p	Coupe	2,195
3686	5-p	Sedan	2,295
3822	7-p	Sedan	2,495
		"70"	
.....	5-p	Touring	$1,295
3050	5-p	Sedan	1,495

Mechanical Specifications of Current Passenger Car Models

This list comprises cars distributed on a national basis

MAKE AND MODEL	Wheel Base (Inches)	Tire Size Decimals-Balloons	ENGINE: Make and Model	Number of Cyls., Bore and Stroke	Rated H.P. N.A.C.C.	Piston Displacement	Valve Arrangement	Camshaft Drive	Crankcase Integ. or Sep.	Piston Material	No. Main Bear.	Oiling System	Oil Cleaner?	Cooling System	Thermostat?	Carburetor Make	Air Cleaner?	ELECTRICAL SYSTEM: Ignition System Make	Generator and Starter Make	Clutch—Type and Make	Gear Set—Make	Universals—Type and Make	REAR AXLE: Type and Make	Gear Ratio	BRAKES: Foot—Type and Location	Hand—Type and Location	4-Wheel Type =Optional	Steering Gear—Make	Rear Springs—Type and Length	Chassis Lubrication—Type and Make
Ajax	108	30x4.75	Own	6-3x 4	21.6	170	L	He.	Int.	C I.	7	P K	N	Pu.	N	Car	N	A-L.	A-L.	P.B&B.	Own	f-The	½ Own.	4.77	B-F.	E-T	M	Ross.	S-50½	Pr-Al.
Apperson	6	33x6.00	Own	6-3⅛x4¼	24.4	204	I	He.	Int.	C I.	4	P F.	N	Th.	N	Str	N	Remy.	Remy.	P.Roc.	Mec	m-Stl	½ Col.	5.10	B-F.	I-R.	M	Ross.	J-48	Pr-Ze.
Apperson	St. Away 8	33x6.20	Lyc	2-H 8-3⅛x4½	31.3	276	L	Ch.	Sep.	C I.	5	P C.	N	Pu.	N	Sch	N	Remy.	Remy.	P.Roc.	Mec	m-Mec.	½ Col.	5.10	B-F.	I-R.	M	Ross.	J-48	Pr-Ze.
Auburn	4-44	120	30x5.25	Lyc CF	4-3⅝x5	21.0	206	L	He.	Sep.	C I.	5	P C.	N	Th.	N	Zen	N	Remy.	Remy.	P.B&B.	W-G	m-Uni	½ Sal.	5.10	E-F.	E-T	H	Ross.	S-56¾	Oc-Ju.
Auburn	6-66	121	30x5.25	Lyc 4SM	6-3¼x4½	25.3	224	L	Ch.	Sep.	C I.	4	P C.	N	Pu.	N	Sch	N	Remy.	Remy.	P.Long.	W G	m-Uni	½ Col.	5.10	B-F	E-T	M	Ross.	S-57	Pr-Dot
Auburn	8-88	129	30x5.77	Lyc 4HM	8-3¼x4½	33.8	299	L	Ch.	Sep.	C I.	5	P C.	N	Pu.	N	Sch	N	Remy.	Remy.	P.Long.	W-G	m-Uni	½ Col.	5.10	B-F.	E-T	M	Ross.	S-57	Pr-Dot
Buick	Standard	114⅜	31x5.25	Own Std.	6-3⅛x4½	23.4	207	I	He.	Sep.	C I.	4	P C.	F	Pu.	N	Mar	Y	Delco.	Delco.	D.Own.	Own	m-Own.	¾ Own.	4.90	E-F.	I-R.	M	Jac	V-48	Pr-Ze.
Buick	Master	120-128	33x6.00	Own. Mast.	6-3½x4¾	29.4	274	I	He.	Sep.	C I.	4	P C.	F	Pu.	N	Mar	Y	Delco.	Delco.	D.Own.	Own	m-Own.	Fl Own.	4.70	E-F.	I-R.	M	Jac	V-47⅝	Pr-Ze.
Cadillac	314	132-138	33x6.75	Own 314	8-3⅛x5⅛	31.2	314	L	Ch.	Sep.	C I.	3	P C.	F	Pu.	Y	Own	N	Delco.	Delco.	D.Own.	Own	m-Spi	Fl Own.	Var.	B-F.	I-R.	M	Own	S-60	Pr-Al.
Case	Y	132	34x7.30	Con 6J	6-3¾x5	33.7	331	L	He.	Sep.	C I.	4	P C.	N	Pu.	Y	Sch	N	Delco.	Delco.	D.Own.	Own	f-Sne	¾ Col.	4.45	E-F.	E-T	H	Ross.	S-57	Pr-Sa.
Case	JIC	122	32x6.20	Con 8R	6-3⅜x4½	27.3	242	L	He.	Sep.	C I.	4	P C.	N	Pu.	Y	Sch	N	Delco.	Delco.	D.Own.	Own	f-Sne	½ Col.	4.90	E-F.	E-T	H	Ross.	S-54¾	Pr-Sa.
Chandler	35	123	33x6.00	Own 35	6-3½x5	29.4	289	L	Ch.	Sep.	C I.	4	P C.	N	Pu.	N	Sch	N	Bosch.	Bosch.	P.B&B.	Own	f-Own	¾ Own.	4.45	E-R	E-T	M	Own	S-59¼	Cm-Bo
Chevrolet	K	103	{30x3½† 29x4.40	Own Sup.	4-3¼x4	21.8	171	I	He.	Int.	C I.	3	P S.	N	Pu.	N	Car	Y	Remy.	Remy.	P.Own.	Own	m-Own.	½ Own.	3.82	E-R	I-R.	N	Own	S-54	Pr-Al.
Chrysler	Imperial	120-127	32x6.20	Own	6-3½x5	29.4	288	L	Ch.	Int.	Spe.	7	P F.	Y	Pu.	Y	Str	Y	Remy.	Remy.	P.Own.	Det	m-Uni	½ Tim.	4.27	E-F	E-T	H	Ross.	S-58	Pr-Ze.
Chrysler	"4"	109	30x5.25	Own 25F	4-3⅛x4½	21.0	186	L	He.	Int.	Al.	3	P C.	F	Th.	N	Ste	N	Remy.	Remy.	P. Roc.	Own	f-Own	½ Own.	4.60	E-R	E-T	H*	Gem	S-53	Pr-Ze.
Chrysler	6	112¾-118¾	30x5.77	Own G	6-3⅛x4¾	23.4	218	L	Ch.	Int.	Al.	7	P C.	F	Pu.	Y	Bal	Y	Remy.	Remy.	P. Roc.	Own	m-Uni	½ Own.	4.30	E-F.	E-T	H	Gem	S-51⅞	Pr-Ze.
Cleveland	31	108½	30x4.75	Own 31	6-3x4¼	21.6	166	L	Ch.	Int.	C I.	3	P F.	N	Pu.	N	Til	N	Bosch.	Bosch.	P.B&B.	Own	f-Pic	½ Own.	4.90	E-R	E-T.	M*	CAS	S-51	Cm-Bo
Cleveland	43	115	31x5.25	Own 43	6-3⅛x4¾	23.4	219	L	Ch.	Sep.	C I.	3	P F.	N	Pu.	N	Sch	N	Bosch.	Bosch.	P.B&B.	Own	f-Sne	½ Own.	4.90	E-R	E-T.	M*	CAS	S-54	Cm-Bo
Cunningham	V-6	132-142	33x6.75	Own V8	8-3⅜x5	45.0	442	L	He.	Sep.	C I.	3	P F.	N	Pu.	N	Str	N	Delco.	Delco.	D.Own.	Own	f-Sne	Fl Tim.	4.23	I-F.	I-F.	M	Gem	J-62	Pr-Al.
Dagmar	6-60	120	32x6.20	Lyc 4S	6-3¼x4½	25.3	224	L	Ch.	Sep.	C I.	4	P C.	N	Pu.	N	Sch	N	Delco.	Delco.	P.B&B.	W-M	m-Spi	½ Sal.	5.10	E-R	E-T	H*	Ross	S-52	Pr-Al.
Dagmar	6-70	138	33x5†	Con 6J	6-3⅜x5	33.8	331	L	He.	Sep.	C I.	4	P C.	N	Pu.	N	Sch	N	Delco.	Delco.	D.B-L.	B-L	m-Spi	½ Tim.	4.90	E-R	I-R.	N	Gem	S-52	Pr-Al.
Davis	92	115	30x5.77	Con 11U	6-3¼x4⅝	25.3	230	L	Ch.	Int.	C I.	7	P C.	N	Pu.	N	Str	Y	Delco.	Delco.	P.B&B.	W-G	m-Pet	½ Col.	4.90	E-F.	E-T	H	Ross.	S-52	Oc-Gi
Davis	93	109	29x4.95	Con 20L	6-2¾x4¾	18.1	169	L	Ch.	Int.	C I.	4	P C.	N	Pu.	N	Str	N	Delco.	Delco.	P.B&B.	W-G	m-Pet	½ Col.	....	E-F.	E-T	H	Ross.	S-52	Oc-Gi
Diana	St. 8	125½	32x6.00	Cont 12Z	8-3 x4¼	28.8	240	L	Ch.	Int.	C I.	5	PK.	F	Pu.	N	Str	Y	Delco.	Delco.	P.B&B.	War	m-Mec	½ Col.	5.10	E-F.	E-T	H	Ross.	S-54	Pr-Al.
Dodge Brothers		116	30x5.77	Own	4-3⅞x4½	24.0	212	L	He.	Int.	Al.	3	P S.	N	Pu.	N	Ste	N	N-E.	N-E.	D.Own.	Own	m-Own.	½ Own.	4.16	E-R	I-R.	N	Own	S-55	Pr-Ze.
Duesenberg	St. 8	134-141	33x5	Own A	8-2⅞x5	26.4	260	I	Sp.	Int.	Al.	3	P K	Y	Pu.	Y	Scoe	N	Delco.	Delco.	P.Own.	Own	f-Cli	½ Own.	4.90	I-F.	E-T	H	Ross.	S-59	Pr-Do.
DuPont	D	124	32x6.20	Wis Y	6-3⅜x5	27.3	268	I	Ch.	Int.	C I.	3	P C.	N	Pu.	N	Sch	N	Bosch.	Bosch.	D.Long.	Cpl	m-Uni	½ Col.	4.45	E-F.	E-T	H	Ross.	S-59	Pr-Al.
Durant	A-22	109	30x5.25	Own	4-3⅞x4¼	24.0	200	I	He.	Int.	C I.	3	P S	N	Pu.	N	Til	N	A-L.	A-L.	P.Own.	Own	m-Spi	½ Own.	4.33	E-R	I-R.	N	Own	S-50½	Pr-Al.
Elcar	4-55	116	30x5.25	Lyc CF	4-3⅝x5	21.0	206	L	He.	Sep.	Al.	5	P C.	N	Th.	N	Swan.	N	A-L.	A-L.	P.B&B.	W-G	m-Mec	½ Sal.	4.70	E-R	E-T	M	Ross	S-51	Pr.Al
Elcar	6-65	116	30x5.25	Lyc S	6-3⅛x4¼	23.4	196	L	Ch.	Sep.	C I.	4	P C.	N	Pu.	N	Swan.	N	Remy	Remy.	P.Long.	W-G	m-Mec	½ Sal.	4.70	E-F	E-T	H	Ross	S-51	Pr-Al
Elcar	8-81	127	32x6.00	Lyc 4H	8-3¼x4½	33.8	299	L	Ch.	Sep.	C I.	5	P C.	Y	Pu.	Y	Swan.	N	Remy	Remy.	D.Long.	W-G	m-Spi	½ Sal.	4.71	E-F	E-T	H	Ross	S-58	Cm-Bo
Essex	6	110½	30x4.95	Own 6	6-2¾x4¼	17.3	145	L	Ch.	Int.	Al.	3	Sp.	N	Th.	N	Ste	N	Bosch	Bosch.	D.Own.	Own	m-Spi	½ Own.	5.60	E-R	I-R.	N	Own	S-54⅞	Ow
Flint	Jr. 6	110	30x5.25	Con 9L	6-2¾x4¾	18.1	169	L	Ch.	Int.	C I.	4	P F.	N	Pu.	N	Zen	N	A-L.	A-L.	P.Own.	Own	m-Spi	½ Own.	4.87	E-R	E-T	N	War	S-52	Pr-Ze.
Flint	60	115	30x5.77	Con 14U	6-3¼x4⅝	25.3	230	L	Ch.	Int.	C I.	7	P C.	Y	Pu.	Y	Str	Y	A-L.	A-L.	P.Own.	War	m-Spi	½ Ada.	4.77	I-F.	E-T	H	Ross	S-51½	Pr-Ze.
Flint	80	120	32x6.20	Con 6E	6-3⅜x5	27.3	268	L	Ch.	Int.	C I.	7	P C.	Y	Pu.	Y	Str	Y	DeJo.	DeJo.	P.Own.	War	m-Spi	½ Ada.	4.77	I-F.	E-T	H	Ross	S-55	Pr-Ze.
Ford	T	100	30x3½†	Own T	4-3⅜x4	22.5	177	L	He.	Int.	C I.	3	Sp.	N	Th.	N	Own	N	Own	Own.	D.Own.	Own	m-Own.	½ Own.	3.63	E-T	I-R.	N	Own	O-43½	OG
Franklin	11A	119	31x5.25	Own 11A	6-3¼x4	25.3	199	I	Ch.	Sep.	Al.	7	P C.	N	A...	N	Str	Y	Dyn.	Dyn.	P.B-L.	Own	m-Spi	½ Own.	4.73	E-T	E-R	N	Own	S-38	Pr-Ze.
Gardner	6A	118	31x5.25	Lyc 4S	6-3¼x4½	25.3	224	L	Ch.	Sep.	C I.	4	P C.	N	Pu.	N	Sch	N	Remy.	Remy.	P.B&B.	War	m-Cle	½ Col.	4.90	I-F.	I-R.	M	Ross	S-57	Pr-Al.
Gardner	8A	125	32x6.00	Lyc 2H	8-3⅛x4½	31.2	276	L	Ch.	Sep.	C I.	5	P C.	N	Pu.	Y	Sch	N	Remy.	Remy.	P.B&B.	War	m-Cle	½ Col.	5.10	I-F.	I-R.	M	Ross	S-57	Pr-Al.
Gray	S	105	29x4.40	Own R	4-3⅝x4	21.0	165	L	He.	Int.	C I.	3	Sp.	Y	Th.	N	Scoe	N	A-L.	A-L.	P.Own.	Det	f-Sne	½Tim.	3.90	E-F.	E-T	M	Own	2 Q-30	Pr-Ze.
Hertz	D-1	114	30x5.77	Con 18U	6-3⅛x4¼	23.4	196	L	Ch.	Int.	C I.	4	P S.	N	Pu.	N	Zen	N	Delco.	Delco.	D.Long.	Det	m-Spi	½ Tim.	4.89	E-R	E-T	O*	Ross	S-56	Pr-Al.
Hudson	Super 6	127⅜	33x6.00	Own 6	6-3½x5	29.4	288	L	Ch.	Sep.	Al.	4	Sp.	N	Pu.	N	Ste	N	Bosch	Bosch.	D.Own.	Own	m-Spi	½ Own.	4.45	E-R	I-R.	N	Gem	S-57½	Ow
Hupmobile	"A"	114	30x5.25	Own "A"	6-3⅛x4¼	23.4	196	L	Ch.	Int.	C I.	4	P C.	N	Pu	N	Ste	N	A-L.	A-L.	P-B&B.	Det	m-Mec	½ Own.	4.90	B-F	E-R	M	Ross	S-54	Pr-Al.
Hupmobile	E-1	125	33x6.00	Own E-1	8-3 x4¾	28.8	268	L	Ch.	Sep.	C I.	5	P K	N	Pu.	Y	Str	N	Delco.	A-L.	P.Long.	Det	m-Uni	½ Own.	4.91	E-F	E-T	H	Ross	S-56½	Pr-Ba.
Jewett	New Day	109	29x4.75	Con. Spec.	6-2¾x4¾	18.1	169	L	Ch.	Int.	C I.	4	P C.	N	Pu.	N	Joh	N	Remy.	Remy.	P. Roc.	War	m-Mec	½ Sal.	4.90	E-F.	E-T	H	Gem	S-54	Pr-Ze.
Jordan	Series A	125½	32x6.20	Con. Spec.	8-3 x4¾	28.8	268	L	Ch.	Sep.	C I.	5	P F.	F	Pu.	Y	Str	Y	Bosch.	Bosch.	P.Det	Det	m-The	½ Tim.	4.64	E-F.	E-T	H	Gem	S-55¾	Pr-Al.
Jordan	J	116	30x6.00	Con. Spec	8-2⅞x4¾	26.4	247	L	Ch.	Int.	C I	5	P F.	N	Pu	Y	Str	Y	Bosch.	Bosch.	P.Long	War	m.Uni	½ Tim.	4.45	E-F.	E-T	H	Gem	S-55¾	Pr-Al.
Kissel	55	121	33x6.00	Own 55	6-3⅛x5⅛	26.3	265	L	Ch.	Int.	Al.	3	P F.	Y	Pu.	Y	Str	Y	Remy.	Remy.	P.B&B.	W-G.	m-Pet.	½ Tim.	4.09	E-F.	E-T	H	Ross	S-56	Pr-Da.
Kissel	75	126-137	33x6.00	Own 75	8-3⅛x4½	32.6	310	L	Ch.	Int.	Al.	5	P F.	Y	Pu.	Y	Sch	Y	Remy.	Remy.	P.B&B.	W-G	m-Pet.	½ Tim.	4.90	E-F.	E-T	H	Ross	S-56	Pr-Da.
Lexington	6-50	119	30x5.77	Ans M	6-3⅛x4½	26.3	233	I	Ch.	Int.	C I.	3	P F.	Y	Pu.	N	Sch	Y	Delco.	Bosch.	D.Long.	W-G	f-Pick	½ Sal.	5.10	E-F.	E-T	H	Ross	S-56	Pr-Do
Lincoln	8	136	33x5†	Own 8	8-3⅜x5	36.4	358	L	Ch.	Sep.	Al.	5	P C.	N	Pu.	Y	Str	N	Delco.	Delco.	D.Own.	Own	m-Spi	Fl Tim.	4.58	E-R	I-R.	N	Own	S-60	Pr-Al.
Locomobile	Jr. 8	124	30x5.77	Own. Jr. 8	8-2¾x4	25.3	206	I	Ch.	Int.	C I.	5	P K	F	Pu.	N	Str	Y	DeJo.	DeJo.	P. Spi	Own	m-Uni	½ Own	4.77 5.11	I-F.	I-R.	Se	Ross.	S-55⅝	Pr-Ze.
Locomobile	48	142	35x6.75	Own 48	6-4½x5½	48.6	525	T	He.	Sep.	C I.	7	P F.	F	Pu.	Y	Bal	N	Delco	Wes	P.Own	Own	m-Spi	Fl Own.	3.50	B-F.	I-R.	M	Ross.	J-50	Pr-Ze.
Locomobile	"90"	138	33x6.75	Own 90	6-3⅞x5¼	36.0	372	L	Ch.	Sep.	C I.	7	P C.	F	Pu.	Y	Str	Y	DeJo.	DeJo.	P.Own.	Own	m-Uni	½ Eat.	4.5	I-F.	I-R.	Se	Ross.	S-60	Pr-Ze

KEY TO SYMBOLS

•—At extra cost
†—Balloons at extra cost
½—Semi-floating
¾—Three-quarter floating
A—Air
Al—Aluminum
B—Semi-steel
B-F—Both internal and external, four wheels
Ch—Chain
CI—Cast iron
Cm—Central magazine
Cu—Oil and grease cups
D—Multiple disk
E—Full elliptic
E-F—External four wheels
E-R—External rear wheels
E-T—External transmission
f—Fabric
F—Filter
Fl—Full floating
G—Head and side
Gr—Grease cups
H—Horizontal (valves)
H—Hydraulic (brakes)
He—Helical gear
I—In head
Int—Integral
I-F—Internal four wheels
I-R—Internal rear wheels
J—Three-quarter elliptic
K—Cone
L—L head
m—Metal
M—Mechanical
N—None
N—Platform (rear springs)
O—Optional (brakes)
O—Special type (rear springs)
Oc—Oil cups
OG—Oil and Grease Cups
Ow—Oil cups with wick feed
P—Single plate
Pr—Pressure gun
PC—Pressure to all crankshaft and connecting rod bearings
PF—Full pressure to all bearings
PK—Pressure to crankshaft, connecting rods and camshaft bearings
PS—Splash with pressure
Pu—Pump
Q—Quarter elliptic
R—Rectifier
S—Semi-elliptic
Se—Servo
Sep—Separate
Sp—Splash (lubrication)
Sp—Spur gear (camshaft drive)
Spe—Special make
Sta—Standard
T—T head
Th—Thermo-syphon
V—Cantilever
Var—Varies
X—Sleeve valve
Y—Yes

ABBREVIATIONS—NAMES OF MFRS. OF STOCK PARTS

A-K—Atwater-Kent
A-L—Auto-Lite
Ada—Adams
Al—Alemite
Ana—Ansted
B&B—Borg & Beck
B-L—Brown-Lipe
Bal—Ball & Ball
Ba—Bassic cups
Bo—Bowen Products
Car—Carter
CAS—CAS Products
Cle—Cleveland
Cli—Climax
Con—Continental
Conn—Connecticut
Col—Columbia
Cpl—Campbell
Da—Dawson
DeJo—DeJon
Det—Detroit
Dit—Ditweiler
Do—Dot
Due—Duesenberg
Dur—Durston
Dyn—Dyneto
Eat—Eaton
Fli—Flint
Ful—Fuller
Gem—Gemmer
Gi—Gits
Hoo—Hoosier
Jac—Jacox
Joh—Johnson
Ju—Justrite
L-N—Leece-Neville
Lav—Lavine
Lyc—Lycoming
M&E—Merchant & Evans
Mar—Marvel
Mec—Mechanics Machine
Mon—Monson [Co.
Mun—Muncie
N-E—North East
Nor—Northway
Pet—Peters
Ray—Rayfield
Roc—Rockford
Sa—Saal
Sal—Salisbury
Sch—Schebler
Sne—Snead
Spe—Special Make
Spi—Spicer
Spl—Splitdorf
Ste—Stewart
Stl—Sterling
Str—Stromberg
Thr—Thermoid
The—Thiemer
Til—Tillotson
Tim—Timken
Uni—Universal
W-G—Warner Gear
Wag—Wagner
War—Warner
Wat—Watford
Wes—Westinghouse
W-M—Willys-Morrow
Wis—Wisconsin
Ze—Zerk
Zen—Zenith

(Continued on page 48)

Lockheed Hydraulics Better for the Dealer

When the car he handles is Lockheed equipped, a far smaller percentage of the dealer's gross profit is eaten up in free brake service.

For Lockheed Hydraulic Four-Wheel Brakes retain their equalization and effectiveness permanently.

Futhermore, there is little, or no, adjustment required before car delivery.

Add to this greater popularity of Lockheed Hydraulic Four-Wheel Brakes the greater satisfaction which they assure car owners, and you have the chief reasons why Lockheed Hydraulics are better for the dealer.

The Answer

LOCKHEED HYDRAULIC *Four* BRAKES *Wheel*

LOCKHEED-WAGNER SERVICE

Nation-wide special service on Lockheed Hydraulic Four-Wheel Brakes is at your command in strategically located cities through the Wagner Electric Corporation. Each of these service centers carries a complete stock of Lockheed parts, and is equipped with men and machinery that assure expert service.

HYDRAULIC BRAKE COMPANY, DETROIT, MICHIGAN

Mechanical Specifications of Current Passenger Car Models—Continued

(From page 46)

(This list comprises cars distributed on a national basis)

MAKE AND MODEL	Wheel Base* (Inches)	Tire Size Decimals-Balloons	ENGINE: Make and Model	ENGINE: Number of Cyls., Bore and Stroke	ENGINE: Rated H.P. N.A.C.C.	ENGINE: Piston Displacement	ENGINE: Valve Arrangement	ENGINE: Camshaft Drive	ENGINE: Crankcase Integ. or Sep.	ENGINE: Piston Material	ENGINE: No. Main Bear.	ENGINE: Oiling System	ENGINE: Oil Cleaner?	ENGINE: Cooling System	ENGINE: Thermostat?	ENGINE: Carburetor Make	ENGINE: Air Cleaner?	ELECTRICAL SYSTEM: Ignition System Make	ELECTRICAL SYSTEM: Generator and Starter Make	Clutch—Type and Make	Gear Set—Make	Universals—Type and Make	REAR AXLE: Type and Make	REAR AXLE: Gear Ratio	BRAKES: Foot—Type and Location	BRAKES: Hand—Type and Location	BRAKES: 4 Wheel Type (*=Optional)	Steering Gear—Make	Rear Springs—Type and Length	Chassis Lubrication—Type and Make
Marmon	74	136	32x6.20	Own	74	6-3¾x5½	33.8	340	I	He.	Sep.	Al. CI	3	P F.	Y	Pu.	N	Sch.	N	Delco.	Delco.	D.Own.	Own.	m-Spi.	¾ Own.	Var.	E-R	I-R.	M*	Own.	O-45.	Cm-Bo
McFarlan	SV	127	33x6.20	Wis	Y	6-3⅜x5	27.3	268	L	Ch.	Int.	C I.	3	P F.	N	Pu.	N	Ray.	N	Delco.	Delco.	D.Long.	W-G.	m-Uni.	½ Tim.	4.27	E-F.	E-T	H	Ross.	S-58½.	Ow.
McFarlan	St. 8	131	33x6.20	Lyc	3H	8-3⅛x4½	32.6	287	L	Ch.	Sep.	C I.	5	P F.	N	Pu.	N	Sch.	N	Delco.	Delco.	P. B&B.	W-G.	m-Uni.	½ Tim.	5.11	E-F	E-T	H	Ross.	S-58½.	Ow.
McFarlan	TV	140	33x6.75	Own	TV	6-4½x6	48.6	573	T	He.	Sep.	Al.	4	P F.	N	Pu.	N	Ray.	N	DeJo	DeJo	P.B&B.	B-L.	f-Sne.	Fl Tim.	3.53	E-F.	I-R.	H	Ross.	S-64.	Cm-Bo
Moon	London	128	32x6.20	Con	8R	6-3⅜x4½	27.3	242	L	He.	Sep.	C I.	4	P C.	N	Pu.	N	Str.	N	Delco.	Delco.	P.B&B.	B-L.	m-Spi.	½ Tim.	5.09	E-F.	I-R.	H	Ross.	S-54⅞.	Oc-Ba
Moon	Series A	113	30x5.25	Con	7Z	6-3½x4¼	23.4	196	L	Ch.	Int.	C I.	4	P C.	N	Pu.	N	Str.	N	Delco.	Delco.	P.B&B.	W-G.	m-Spi.	½ Sal	4.82	E-F.	E-T	H	Ross.	S-54.	Pr-Al.
Nash	Advanced	121–127	33x6.00	Own	261	6-3 1/16x5	28.4	279	I	He.	Int.	C I.	7	P C.	F	Pu.	N	Mar.	Y	Delco.	Delco.	P.B&B.	Own.	m-Own.	½ Own.	4.50	B-F.	E-T	M	Gem.	S-56½.	Pr-Al.
Nash	Special	112½	31x5.25	Own	231	6-3⅛x4½	23.4	207	I	He.	Int.	C I.	3	P C.	N	Pu.	N	Mar.	Y	Delco.	Delco.	P.B&B.	Own.	m-Own.	½ Own.	4.90	B-F.	E-T	M	Gem.	S-53⅞.	Pr-Al.
Oakland	"6"	113	30x5.25	Own	OS	6-2⅞x4¾	19.8	185	L	Ch.	Sep.	C I.	3	P K	F	Pu.	N	Str.	Y	Remy.	Remy	P. Own.	Mun.	m-Mec.	½ Own.	4.73	E-F.	E-T	M	Jac.	S-52½.	Pr-Dot
Oldsmobile	30	110½	30x4.95	Own	30	6-2¾x4¾	18.2	169	L	Ch.	Int.	C I.	3	P C.	N	Pu.	N	Car.	N	Delco.	Delco.	P.B&B.	Mun.	f-Thr.	½ Own.	5.10	E-R	E-T	N	Jac.	S-50¼.	Pr-Dot
Overland	91	100	29x4.40	Own	91	4-3½x4	19.6	154	L	He.	Int.	C I.	3	Sp.	N	Th.	N	Til.	N	A-L.	A-L.	P.B&B.	Own.	m-Own.	½ Own.	4.50	E-R	I-R.	N	Own.	O-25.	OG.
Overland	93	112¾	29x4.95	Own	93	6-3 x4	21.6	170	L	He.	Int.	Al.	3	P C.	N	Pu.	N	Til.	N	A-L.	A-L.	D.Own.	Own.	m-Own.	½ Own.	5.11	E-R	E-T	N	Own.	S-52½.	Pr-Al.
Packard	6	126–133	33x5.77	Own	6	6-3½x5	29.4	289	L	Ch.	Sep.	C I.	7	P F.	R	Pu.	Y	Own.	N	Delco.	Dyn.	D.Own.	Own.	m-Mec.	½ Own.	4.66 5.10	B-F.	I-R.	M	Own.	S-56.	Cm Bij
Packard	8	136–143	33x6.75	Own	8	8-3⅜x5	36.4	358	L	Ch.	Sep.	C I.	9	P F.	R	Pu.	Y	Own.	N	Delco.	Dyn.	D.Own.	Own.	m-Mec.	½ Own.	4.66	B-F.	I-R.	M	Own.	S-56.	CmBij
Paige	24-26	125	32x6.00	Own		6-3¾x5	25.4	249	L	Ch.	Int.	C I.	3	P F.	N	Pu.	Y	Str.	Y	A-K.	Remy.	D.Long.	W-G.	m-Mec.	½ Sal.	4.82	E-F.	E-T	H	Gem.	S-58.	Pr-Ze.
Peerless	6-72	126–133	33x6.00	Own	72	6-3½x5	29.4	289	L	Ch.	Sep.	C I.	7	P C.	N	Pu.	N	Joh.	N	Delco.	Delco.	D.Own.	Own.	m-Uni.	¾ Eat.	4.90	E-F.	I-R.	H	Gem.	S-56.	Pr-Al.
Peerless	6-80	116	30x5.77	Con	8U	6-3¼x4⅝	25.3	230	L	Ch.	Int.	C I.	7	P C.	Y	Pu.	N	Str.	N	A-L.	A-L.	P.B&B.	Det.	m-Uni.	½ Col.	4.46	E-F	E-T	H	Ross.	S-54¼.	Pr-Al.
Peerless	69	133½	33x6.20	Own		8-3¼x5	33.8	332	L	Ch.	Sep.	C I.	3	P F.	F	Pu.	N	Str.	N	Delco.	Delco.	P. Own.	Own.	m-Spi.	¾ Tim.	4.42	E-F.	I-R.	H	Ross.	S-54.	Pr-Al.
Pierce Arrow	33	138	33x5	Own	33	6-4 x5½	38.4	415	T	He.	Sep.	C I.	7	P F.	N	Pu.	Y	Own.	N	Delco.	Delco.	D.Own.	Own.	m-Spi.	½ Own.	4.29	E-R	I-R.	M*	Own.	S-61½.	Pr-Ze.
Pierce Arrow	80	130	32x5.77	Own	80	6-3½x5	29.4	289	L	Ch.	Sep.	C I.	7	P F.	N	Pu.	Y	Own.	N	Delco.	Delco.	P.B&B.	B-L.	m-Spi.	½ Tim.	4.45	I-F.	I-R.	M	Gem.	S-56½.	Pr-Ze
Pontiac	6	110	29x4.75	Own		6-3¼x3¾	25.3	186	L	Ch.	Int.	C I.	3	P C.	N	Pu.	N	Car.	N	Remy.	Remy.	P. Own.	Own.	m-Own.	½ Own.	4.18	E-R	I-R.	N	Mun.	S-54.	Pr-Dot
Reo	T6	120	32x6.20	Own	T6	6-3⅜x5	24.3	239	G	He.	Int.	Al.	4	P S.	N	Pu.	N	Sch.	N	N-E.	N-E.	D.Own.	Own.	m-Own. f-Own.	¼ Own.	4.70	E-R	I-R.	N	Own.	S-54½. S-55¼.	Pr-Ze.
Revere	M	131	32x4½†	Mon	M	4-4⅜x6	30.6	360	H	Ch.	Int.	Al.	2	P C.	Y	Pu.	N	Str.	N	Bosch.	Wes.	P.B&B.	B-L.	m-Spi.	½ Own.	Var.	I-R.	E-R	M*	Gem.	S-60.	Oc.
Revere	25	131	32x6.20	Con	6J	6-3¾x5	33.8	331	L	He.	Sep.	C I.	4	P C.	N	Pu.	N	Sch.	N	Bosch.	Bosch.	D.Ful.	Ful.	m-Spi.	¾ Col.	Var.	I-F.	E-T	M	Gem.	S-60.	Pr-Al.
Rickenbacker	E	117	31x5.25	Own	E	6-3¼x4¾	25.3	236	L	Ch.	Int.	C I.	7	P C.	Y	Pu.	N	Str.	Y	Bosch.	Bosch.	P.Long.	Mec. War.	m-Mec.	½ Col.	4.70	I-F.	E-T	M	Gem.	S-57.	Pr-Al.
Rickenbacker	B-8	121½	33x6.00	Own	B-8	8-3¼x4¾	33.8	315	L	Ch.	Int.	C I.	9	P C.	Y	Pu.	N	Zen.	Y	Delco.	Bosch.	P.Long.	War.	m-Mec.	½ Col.	4.70	I-F.	E-T	M	Gem.	S-59.	Pr-Al.
Roamer	6-54-E	118–138	32x4½†	Con	9N	6-3½x5¼	29.4	303	L	He.	Sep.	C I.	3	P S.	N	Pu.	N	Str.	N	Spl.	Wes.	P.B&B.	Ful.	f-M&E.	¾ Tim.	4.45	E-R	I-R.	M*	Jac.	V-55¾.	Pr-Al.
Roamer	4-75-E	128	32x4½†	R-D	G1	4-4¼x6	28.9	340	H	Ch.	Sep.	Al.	3	P C.	N	Pu.	N	Str.	N	Spl.	Wes.	D.B-L.	B-L.	f-M&E.	¾ Tim.	4.63	E-R	I-R.	M*	Jac.	V-55¾.	Pr-Al.
Roamer	6-50-55	115	31x5.25	Con	7U	6-3⅛x4¼	23.4	196	L	Ch.	Int.	C I.	4	P C.	N	Pu.	N	Sch.	N	Spl.	A-L.	P.B&B.	Dur.	f-Uni.	½ Sal.	4.64	E-F.	E-T	H	Ross.	S-52.	Pr-Al.
Roamer	8-88	138	32x6.20	Lyc	H	8-3x4½	28.8	254	L	Ch.	Sep.	C I.	5	P C.	N	Pu.	N	Sch.	N	A-L.	A-L.	P.B&B.	Cpl.	f-Uni.	¾ Sal.	4.08	E-F.	E-T	H	Ross.	V-55¾.	Pr-Al.
Rolls Royce	Silver Ghost	143½	33x5†	Own.	40-50	6-4½x4¾	48.6	453	L	He.	Sep.	Al.	7	P F.	F	Pu.	N	Own.	N	Bosch.	Wes.	K.Own.	Own.	m-Own.	Fl Own.	3.72	I-R.	I-R.	N	Own.	V-54½.	Pr-Al.
Stanley	252	122	32x5.77	Own	252	2-4 x5	20.0	126	....	....	....	C I.	2	Sp.	....	....	....	None.	....	None.	Bosch.	None.	None.	f-Thr.	½ Own.	4.50	E-F.	I-R.	H	Ross.	S-58.	Pr.
Star	4	103	30x3½ 29x4.40	Con.	Spec.	4-3⅜x4¼	18.2	161	L	Ch.	Int.	Spe.	3	P K	N	Pu.	N	Til.	N	A-L.	A-L.	P.Own.	War.	m-Spi.	½ Ada.	4.87	E-R	I-R.	M*	War.	S-53¾.	Pr-Al
Star	"St'd. 6"	107	30x4.95 29x4.40	Con.	Spec.	6-2¾x4¾	18.2	164	L	Ch.	Int.	C I.	4	P K	N	Pu	N	Til.	N	A-L.	A-L.	P.Own.	War.	m-Spi.	½ Ada.	4.87	E-R	I-R.	M*	War.	S-53¾	Pr-Al.
Stearns Knight	B	119	33x4½†	Own	Kni	4-3¾x5⅝	22.5	249	X	Ch.	Sep.	C I.	3	P C	N	Pu.	N	Joh.	N	A-K.	A-L.	D.M&E.	Own.	f-Cli.	½ Own	4.90	E-R	I-R.	H*	Own.	V-50.	Pr-Al.
Stearns Knight	C	121	33x6.00	Own	Kni	6-3¼x5	25.4	249	X	Ch.	Sep.	Al.	4	P C.	N	Pu.	N	Joh.	N	DeJo.	DeJo.	D.M&E.	Own.	f-Cli.	½ Own.	4.90	E-R	I-R.	H*	Ross.	V-50.	Pr-Al.
Stearns Knight	S	130	33x6.60	Own	Kni	6-3½x5	29.4	289	X	Ch.	Sep.	Al.	4	P C.	N	Pu.	N	Joh.	N	DeJo.	DeJo.	D.M&E.	Own.	f-Cli.	½ Own.	4.90	E-R	I-R.	H*	Ross.	S-50.	Pr-Al.
Stevens Duryea	G	138	33x5†	Own	G	6-4 7/16x5½	47.3	511	L	He.	Sep.	C I.	4	P S.	N	Pu.	Y	Str.	Y	Bosch.	Bosch.	D.B-L.	B-L.	m-Spi.	Fl Tim.	3.76	E-R	I-R.	N	Ross.	J-59½.	Pr-Do.
Studebaker	Sta. 6	113	31x5.25	Own	ER	6-3⅜x4½	27.3	242	L	Ch.	Int.	C I.	4	P K	F	Pu.	N	Str.	Y	Wag. Remy	Wag. Remy	P.Own.	Own.	f-Thr.	½ Own.	4.18	E-R	E-T	H*	Own.	S-50⅛.	Pr-Al.
Studebaker	Spec. 6	120	32x6.20	Own	EQ	6-3½x5	29.4	289	L	He.	Sep	C I.	4	P K	F	Pu.	N	Str	Y	Wag. Remy	Wag. Remy	P.Own.	Own.	m-Spi.	½ Own.	4 36	E-R	E-T	H*	Own.	S-56.	Pr-Al.
Studebaker	Big 6	127 120	32x6.20 34x7.30	Own	EP	6-3⅞x5	36.0	353	L	He.	Sep.	C I.	4	P K	F	Pu.	N	Bal.	Y	Wag. Remy	Wag. Remy	P.Own.	Own.	m-Spi.	½ Own.	3.69 4.08	E-R	E-T	H*	Own.	S-56.	Pr-Al.
Stutz	AA	131	32x6.20	Own		8-3⅛x4½	32.5	287	I	Ch.	Int.	B	9	P F.	F	Pu.	N	Zen.	Y	Delco.	Delco.	P.B&B.	Det.	m-Mec.	½ Tim.	3.75	I-F.	E-T	H	Ross.	S-62.	CmMe
Velie	60	118	30x5 25	Own	52	6-3⅛x4⅝	24.4	221	I	He.	Int.	C I.	4	P F.	N	Th.	N	Str.	N	Remy.	Remy.	P.B&B.	Mun.	m-Uni.	½ Own.	4.70	E-F.	E-T	H	Ross.	S-55.	Pr-Do.
Wills Ste. Claire	T6, W6	127	32x6.20	Own		6-3¼x5½	25.4	274	I	He.	Int.	C I.	7	P F.	N	Pu.	Y	Sch.	N	Delco. Bosch.	Delco.	P.Own.	Own.	m-Spi.	½ Tim.	4.45	E-F.	E-T	H	Own.	S-58.	Pr-Al.
Wills Ste. Claire	B&C68	127	32x6.20	Own.	BC68	8-3¼x4	33.8	265	I	He.	Sep.	C I.	3	P F.	N	Th.	N	Sch.	N	Delco.	Delco.	P.Own.	Own.	m-Spi.	½ Tim.	4.45	E-F.	E-T	H	Own.	S-58.	Pr-Al
Willys Knight	66	126	32x6.20	Own	66	6-3¼x4¾	25.4	236	X	Ch.	Sep.	Al.	7	P C.	Y	Pu.	Y	Til.	Y	A-L.	DeJo.	D.Own.	Own.	m-Mec	¾ Own.	5.11	B-F.	I-R.	M	Own.	S-57.	Pr-Al
Willys Knight	70	113¼	30x5.25	Own	70	6-2 11/16x4⅜	20.6	180	X	Ch.	Sep.	Al.	7	P C.	N	Pu.	Y	Til.	Y	A-L.	A-L.	P.B&B.	Own.	m-Mec.	½ Own.	5.11	B-F.	E-T	M	Own.	S-52½.	Pr-Al.

KEY TO SYMBOLS

*—At extra cost
†—Balloons at extra cost
½—Semi-floating
¾—Three-quarter floating
A—Air
Al—Aluminum
B—Semi-steel
B-I*—Both internal and external four wheels
Ch—Chain
CI—Cast iron
Cm—Central magazine
Cu—Oil and grease cups
D—Multiple disk
E—Full elliptic
E-F—External four wheels
E-R—External rear wheels
E-T—External transmission
f—Fabric
F—Filter
Fl—Full floating
G—Head and side
Gr—Grease cups
H—Horizontal (valves)
H—Hydraulic (brakes)
He—Helical gear
I—In head
Int—Integral
I-F—Internal four wheels
I-R—Internal rear wheels
J—Three-quarter elliptic
K—Cone
L—L head
m—Metal
M—Mechanical
N—None
N—Platform (rear springs)
O—Optional (brakes)
O—Special type (rear springs)
OG—Oil and Grease Cups
Ow—Oil cups with wick feed
P—Single plate
Pr—Pressure gun
Oc—Oil cups
PC—Pressure to all crankshaft and connecting rod bearings
PF—Full pressure to all bearings
PK—Pressure to crankshaft, connecting rods and camshaft bearings
PS—Splash with pressure
Pu—Pump
Q—Quarter elliptic
R—Rectifier
S—Semi-elliptic
Sep—Separate
Sp—Splash (lubrication)
Sp—Spur gear (camshaft drive)
Spe—Special make
Sta—Standard
T—T head
Th—Thermo-syphon
V—Cantilever
Var—Varies
X—Sleeve valve
Y—Yes
Z—Balloons on closed models

ABBREVIATIONS—NAMES OF MFRS. OF STOCK PARTS

A-K—Atwater Kent
A-L—Auto-Lite
Ada—Adams
Al—Alemite
Ans—Ansted
B&B—Borg & Beck
B-L—Brown-Lipe
Bal—Ball & Ball
Ba—Bassic cups
Bij—Bijur
Bo—Bowen Products
Car—Carter
CAS—CAS Products
Cle—Cleveland
Cli—Climax
Con—Continental
Conn—Connecticut
Col—Columbia
Cpl—Campbell
DeJo—DeJon
Det—Detroit
Dit—Ditweiler
Do—Dot
Due—Duesenberg
Dur—Durston
Dyn—Dyneto
Eat—Eaton
Fli—Flint
Ful—Fuller
Gem—Gemmer
Gi—Gits
Hoo—Hoosier
Jac—Jacox
Joh—Johnson
L N—Leece-Neville
Lav—Lavine
Lyc—Lycoming
M&E—Merchant & Evans
Mar—Marvel
Me—Meyer
Mec—Mechanics Machine Co.
Mon—Monson
Mun—Muncie
N-E—North East
Nor—Northway
Pet—Peters
R-D—Rochester-Duesenberg
Ray—Rayfield
Roc—Rockford
Sa—Saal
Sal—Salisbury
Sch—Schebler
Sne—Snead
Spe—Special Make
Spi—Spicer
Spl—Splitdorf
Ste—Stewart
Stl—Sterling
Str—Stromberg
Thr—Thermoid
Til—Tillotson
Tim—Timken
Uni—Universal
W-G—Warner Gear
Wag—Wagner
War—Warner
Wat—Watford
Wes—Westinghouse
W-M—Willys-Morrow
Wis—Wisconsin
Ze—Zerk
Zen—Zenith



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Cadillac is one of the outstanding products in American industrial history—not only because of its high quality, but because of the continuity of its leadership among the fine cars of the world.

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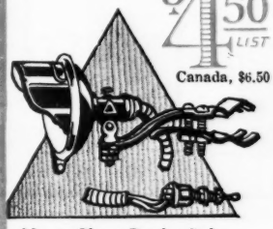
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Canada, $6.50



No. 50 Clamp Bracket Style



No. 24 Spotlight, $3.00 list

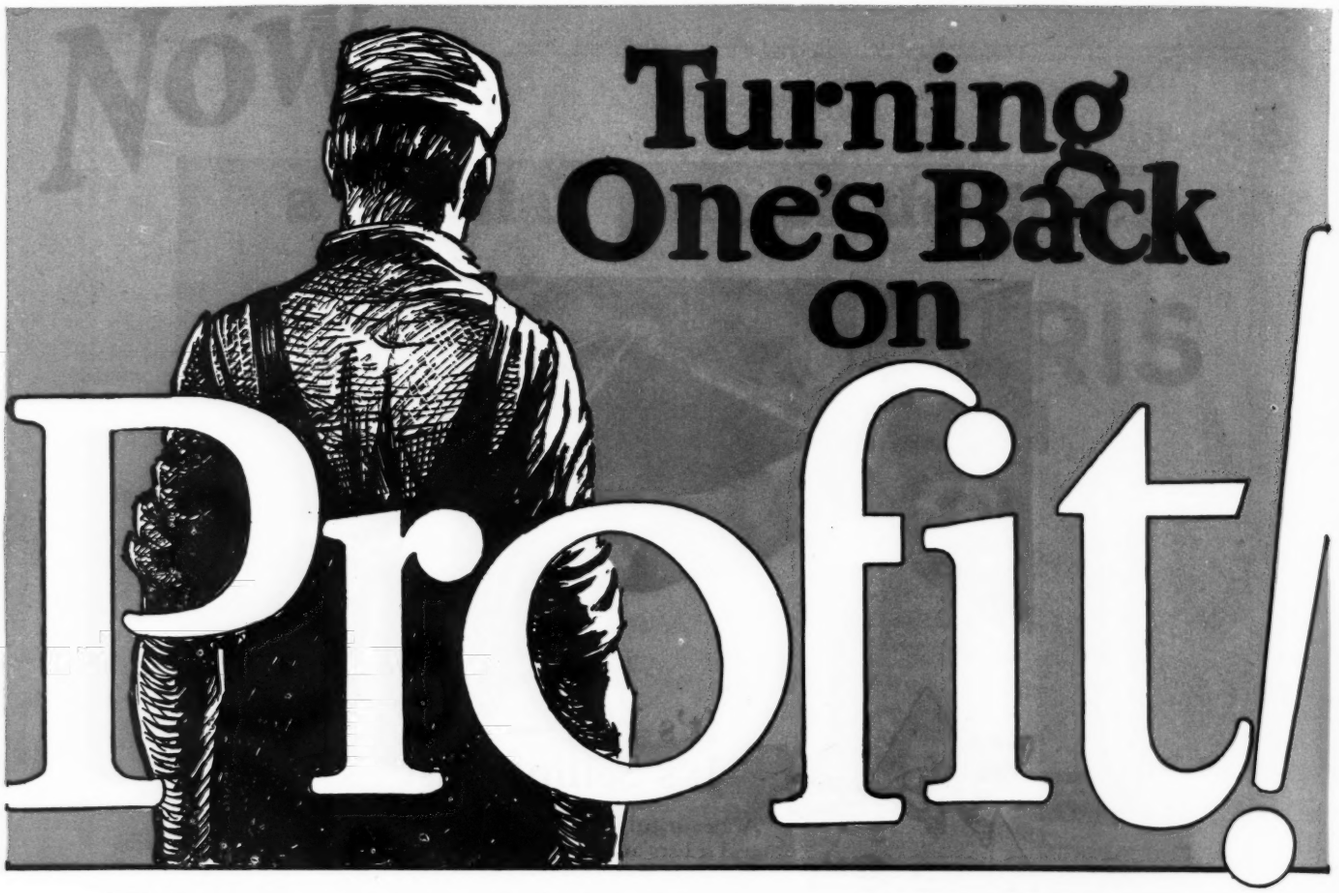
It's Hot— It's Selling Fast

A beautiful lamp for beautiful cars—and it lists at only $4.50. Reflector triple silvered—brackets drawn metal—hand buffed nickel-trimmings—*and it lists at only* $4.50. It is precision manufactured—undergoing seven inspections for scientific adjustments—and it lists at only $4.50. It is a thoroughly "road-tested" product as well as laboratory tested. The keenest kind of auxiliary light at any price—our biggest achievement—and it lists at only $4.50! *No wonder it sells fast.*

Two styles of brackets for mounting anywhere on any car. See your jobber. Write us for full information. Watch for our ads in Liberty Magazine.

DELTA ELECTRIC COMPANY
203 Delta Block Marion, Indiana

Delta
ROADLITE



THERE are service stations, repair shops and equipment stores that seem to deliberately turn their backs on good profits by failing to take advantage of their customers' need of brake linings.

Whenever the repair man starts in to pay special attention to the brakes on cars brought to him, a noticeable increase in profit follows.

Brake Inspection Weeks all over the country are calling attention to the big percentage of cars whose brakes need relining. The condition exists everywhere—even right in your locality. We can help you secure these jobs for your shop.

Write for our very definitely organized Plan for Building up a Profitable Brake Relining Business.

MULTIBESTOS COMPANY, WALPOLE, MASS., U. S. A.



One of the Multibestos color pages in consumer magazines

MULTIBESTOS

REG. U. S. PAT. OFF.

BRAKE LINING

The Kind Most Car Makers Specify

ALSO

Multibestos Taxitrux Brake Lining
Multibestos 229 Transmission Lining for Ford Cars
Multibestos Special Transmission Lining for Ford Cars

Multibestos Clutch Linings
Multibestos No-Wire Transmission Lining for Ford Cars
Multibestos Fibre Transmission Lining for Ford Trucks



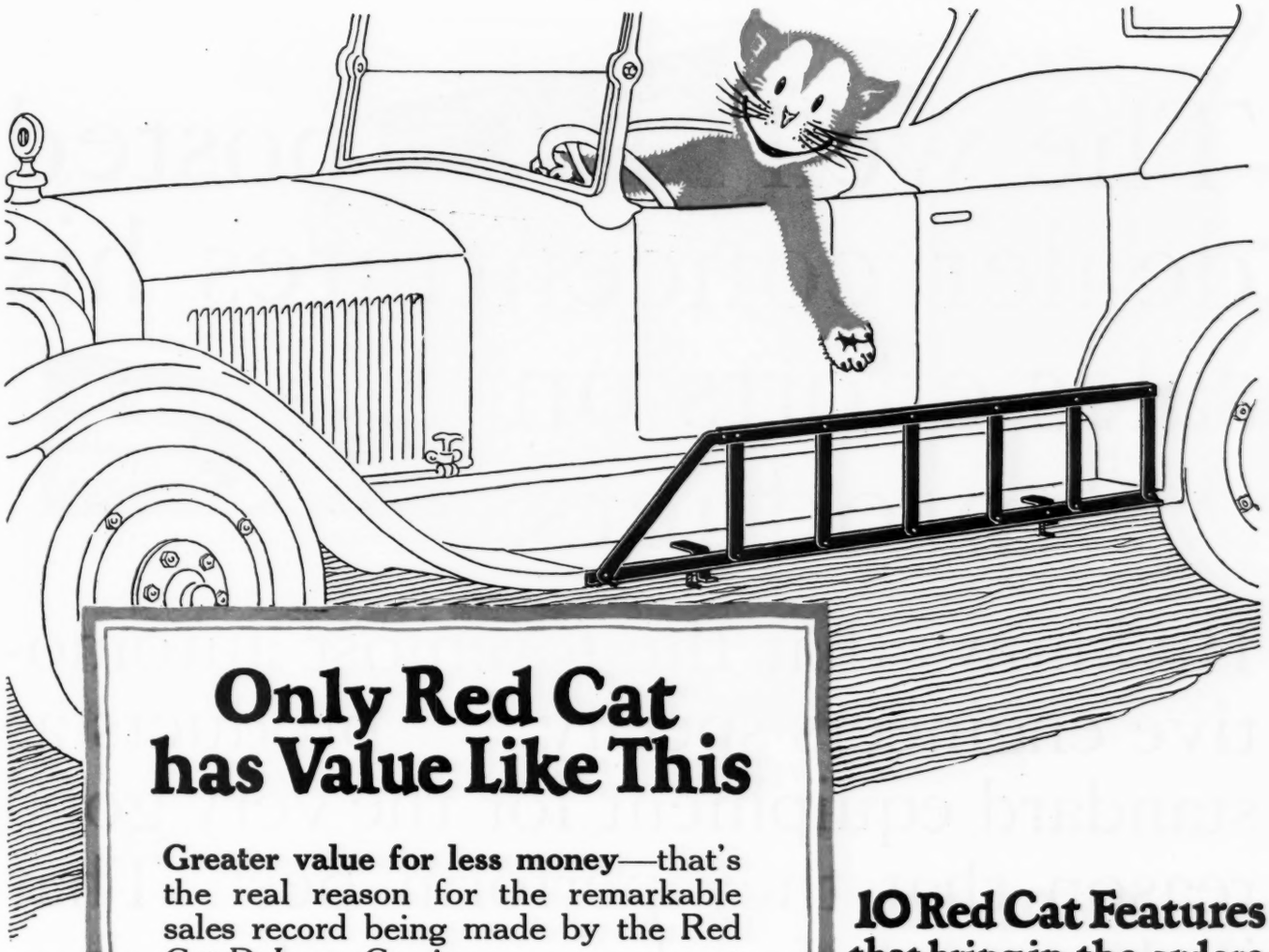
MULTIBESTOS COMPANY
Dept. A2, Walpole, Mass.

Please send me details of the Multibestos Plan to increase my profits.

Name.....

Address.....

.....



Only Red Cat has Value Like This

Greater value for less money—that's the real reason for the remarkable sales record being made by the Red Cat DeLuxe Carrier.

10 Great Advantages make it the fastest selling carrier you ever saw. The same big money's worth as last year—and the price slashed another four-bits! You just can't beat that.

You'll sell scads of them. Your customers will say, "There is a real carrier; give me one." Profits? Yes, sir-ee! Big and many of them.

Better order a stock from your jobber, or we will send you one at half list price. Write NOW!

G. A. ROTH MFG. CO., Hastings, Neb.

Red Cat DeLuxe Carriers

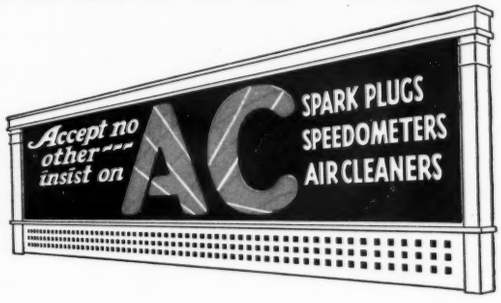
10 Red Cat Features that bring in the orders

1. Folds compactly along running board.
2. Always ready for instant use.
3. No holes in the running board.
4. Quickly clamped with set screws.
5. Car doors open over carrier.
6. Attractive.
7. Absolutely solid — does not rattle.
8. Made of angle iron.
9. Finished in black baked enamel.
10. Low priced.

They Sell Fast at $1.75 and $2.00



The well posted dealer concentrates his sales efforts on AC products.



He knows that the foremost automotive engineers specify AC products as standard equipment for the very good reason that they perform best. That is the reason for their assured market. Backed by strong advertising, they are sold to motorists without sales resistance. They carry a good margin of profit.

AC-SPHINX Birmingham ENGLAND

AC Spark Plug Company, FLINT, *Michigan*

Makers of AC Spark Plugs—AC Speedometers—AC Air Cleaners

AC-OLEO Levallois-Perret FRANCE

AC SPARK PLUGS

THE new AC Spark Plug marks the greatest advance made in spark plug construction in years.

A new design, a new alloy for sparking points, a new electrically fused Kyanite insulator core and a new glaze — in a type and size for every motor.

For Fords there is the famous AC 1075, embodying the above improvements as well as many other special features — and it is now made in both one- and two-piece design.

AC SPEEDOMETERS

THE AC Speedometer for Fords is of the same high quality as furnished for original factory equipment to the manufacturers of Buick, Cadillac, Chandler, Chevrolet, Chrysler, Gray, Oakland, Oldsmobile, Peerless, Pontiac and GMC Trucks.

There is no swivel joint between the front wheel and the instrument—it drives direct—exclusively an AC feature, insuring continuously satisfactory service.

Packed complete with all installation attachments, easily mounted and reasonably priced.

AC AIR CLEANERS

THE AC Air Cleaner prevents dust from entering the motor through the air intake of the carburetor, thereby eliminating excessive wear on the motor's moving parts.

Original factory equipment on Buick, Davis, Locomobile "Jr. 8", Oakland, Nash, Stutz and Willys-Knight "6"—Models available for installation on Chevrolet, Chrysler 4, Dodge Brothers, Ford, Maxwell, Oldsmobile, Star, Studebaker, as well as the 1925 and earlier models of Buick, Nash and Oakland.

Packed complete with all installation attachments, easily mounted and reasonably priced.

"—the bins will have paid for themselves within a very short time!"



VIEW of the Lupton equipped parts department of Wm. L. Keller, Dodge dealer in Olympia, Wash. Observe the neat appearance of the Lupton Steel Parts Systems and convenient arrangement of all items. This parts department is making money. Read the letter.

Balance *your* stock and increase *your* sales with Lupton Auto Parts Systems



Dodge Radiator Rack—This unit is best for storing Dodge Radiators as it keeps them off the floor and protects the delicate cores from injuries which develop leaks. Strongly built and braced to prevent swaying—Price $35.00.



Spring Rack—This rack will carry any load you place on it and will keep your springs, shafts, rods and bars in order. Shipped completely assembled, shipping weight 75 lbs. Price $20.00 f. o. b. warehouse, Chicago, Cleveland or Philadelphia.

10,000 car dealers are making money on parts with Lupton Auto Parts Storage Systems. You can do the same thing.

No matter what profits you are taking from your parts department now—you'll get more if you put in a LAPS System! LAPS reduces obsolete parts and cuts overhead. It balances your stock, increases your sales by good display, and puts system into your replacement service. A LAPS System is your surest way to maximum earnings in the Parts Department.

There is a LAPS System for every car and every dealer's business. Don't keep your capital tied up when you can easily make it pay interest with a LAPS System. Write for full information today.

DAVID LUPTON'S SONS COMPANY
PHILADELPHIA
Sales Office: 2631 Woodward Avenue, DETROIT
SOLE MANUFACTURERS OF LUPTON AUTO PARTS STORAGE SYSTEMS



End Unit No. 984 (Display shelving)—This unit covers the ends of back-to-back LAPS Systems so that the space gives valuable display. Units are 2' wide, 7' high and 12" deep. Furnished with seven shelves and finish moulding for the top. Price $13.60.



Tire Rack—Lupton Steel tire racks are essential in a neat store. They are built in two sizes: 2 and 3 tiers high. Each rack can be used in multiples of four feet. 2 tier rack, 7'6" high, $20.00; 3 tier rack, 10'11" high, $31.00. Additional units, $16.00 and $22.50 respectively.

LUPTON AUTO PARTS STORAGE



"I call it George Washington ~ it never tells a lie."

Complete Ready to Install

$8.50

The K-S Telegage is standard equipment on these leading cars:
Wills Ste. Claire 8
Paige
Willys-Knight 66
Nash Advanced 6
*Oakland
Studebaker
Wills Ste. Claire 6
*Oldsmobile
Willys-Knight 70
Reo Sedan Bus
Ruggles Bus
Commerce Bus
*Standard equipment on some models; optional equipment on other models.

Separate models of the K-S Telegage are now carried in stock ready for installation on any of the following cars:

Dodge	20-26
Hudson	21-26
Jewett	22-25
Oakland-6	24-26
Olds-6	25-26
Reo	23-26
Flint-40	24-25
Overland-6	All
Nash Special-6	25
Nash Special-6	26
Nash Advanced-6	22-25
Buick Standard-6	All

Buick Master-6 not equipped with dash gauge 24-26.
Buick Master-6 equipped with dash gauge 25-26.

One of our friends writes us that this is the way he feels about the K-S Telegage.

Unless a motorist can really feel certain about what his gasoline gauge tells him, he would be better without one. An inaccurate gauge is worse than none at all. Instead of helping the motorist out of trouble, it steers him straight into it.

Here's a simple test that shows how accurate and dependable you will find the K-S Telegage. Fill the gasoline tank with a gallon measure. You will see the Telegage check your filling, gallon for gallon.

This is the test that convinced the car makers who have adopted the Telegage as standard equipment. Its convenience, accuracy and dependability have caused its astounding growth from 1,000 a month to 32,000 a month for standard equipment, in less than a year and a half.

Dealers find the Telegage one of the fastest selling accessories they can handle. Some of the largest car dealers equip every car they sell with the Telegage. You, too, will find the Telegage a welcome ally—not alone because it helps sell cars, but for its additional profit. Simple to install; the tank unit fits in the float gauge opening and a template (included) makes it easy to fit the Telegage on the dash.

Our Saturday Evening Post advertising is educating motorists to look for the Telegage on the cars they buy. Keep ahead of them. Write today for our proposition to dealers.

KING-SEELEY CORPORATION
ANN ARBOR MICHIGAN
298 Second Street

The K-S GASOLINE Telegage

K-S TELEGAGE

BE CERTAIN WITH THE *K–S TELEGAGE*



The Foot Rest Follows the Throttle.

Model F
$3.00
For Fords

Now BLACKHAWK Rest-A-Foot THROTTLE

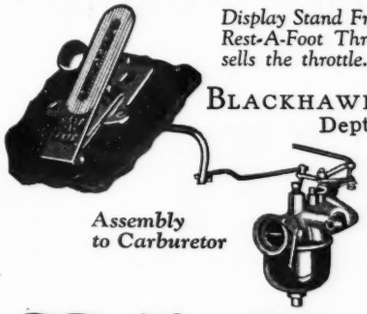
SMOOTH, even gas-feed! No more lurching and jerking. The new Blackhawk Rest-A-Foot Throttle combines comfort with steady gas feed and insures even power over the roughest roads.

Merely shifting the weight of the foot from gas button to foot-rest automatically holds the gas button in position at any speed, over any road. To increase speed merely step on the gas button. When the foot is lifted both button and foot-rest return to idling position.

Blackhawk Rest-A-Foot Throttle is a complete accelerator and automatic foot-rest combined. It fills a long felt need and sells at a price that makes motorists say, "I'll take it!"

The Rest-A-Foot Throttle is easily installed. Both throttle and connections are simple and sturdy. No parts ever need replacement.

If ever a product can sell itself it is the Rest-A-Foot. How many for you? Ask your jobber or write us direct for prices and information.

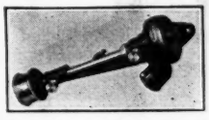


Assembly to Carburetor

Display Stand Free with first order for ten Rest-A-Foot Throttles. Demonstrates and sells the throttle. All Steel—three colors.

BLACKHAWK MFG. COMPANY
Dept. S Milwaukee, Wis.

Blackhawk Water Pumps for Fords



The "CHIEF"

Blackhawk "Chief" is built to sell and built to *last*. Has turbine type head, double bronze bearings, positive double grease lubrication and over-strength construction throughout. Prevents overheating in summer. Minimizes danger of winter freezing. A year 'round seller at $7.50 including belt and horn bracket. Fits 1926 and previous models.

The "SCOUT"



For those who want something lower priced. A high grade pump in every way with many features of the "Chief". Bring out the "Scout" if they balk at the price of the "Chief". A wonder value at $5.00 including belt and horn bracket. Fits 1926 and previous models.



Sells "Q. D." Wrenches in Sets

This handsome steel cabinet holds a full assortment of "Q. D." handles and sockets—from it you can quickly assemble a set for any car. Put it on a prominent counter. Watch it *sell sets*—and boost your profits. Set book furnished with cabinet. See your jobber or write us.

BLACKHAWK

The BUICK Franchise means Your Pick of Salesmen



The past record of Buick motor cars . . . the great public following their excellence has won . . . and then the outstanding value in the Better Buick, are factors which induce the best salesmen to seek service under the Buick banner.

You can have your pick of salesmen if you have Buicks to sell.

the Better BUICK

BUICK MOTOR COMPANY, FLINT, MICHIGAN

Division of General Motors Corporation

Pioneer Builders of Valve-in-Head Motor Cars

Branches in All Principal Cities—Dealers Everywhere

WHEN BETTER AUTOMOBILES ARE BUILT, BUICK WILL BUILD THEM



U.S. CAR WASHING EQUIPMENT

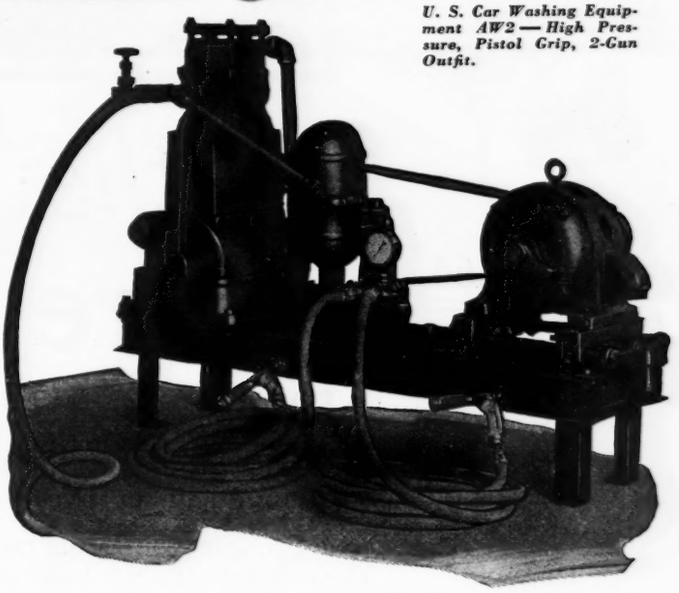
Clean, Rapid Car Washing Means *Real* Profits!

To make car washing pay sure profits you've got to wash cars clean and wash 'em fast! You must have high pressure—constantly. U. S. Car Washing Equipments deliver over 300 pounds pressure at the nozzle! You can adjust instantly to a light mist for finishing fine cars, or to a powerful gusher of water or soap solution to knock crusted mud or caked grease from the chassis.

U. S. Car Washing Equipments are designed to give full pressure for either 2-gun or 4-gun continuous operation. U. S. Equipment is built to stand the gaff by experts who *know how* from long experience! The pump is fool-proof and protected against negligence—***all bearings and moving parts are completely enclosed and continuously bathed in oil—no oil and grease cups to bother about!***

U. S. one-hand, pistol grip guns are short and compact, you're close to your work, you can see it and get at all parts of any car without twisting or straining of hose.

With U. S. Car Washing Equipment you connect direct to both your city water and warm water supply and place your equipment just where you want it. Or if you prefer, you can use barrels for soap solution or clear water.



U. S. Car Washing Equipment AW2 — High Pressure, Pistol Grip, 2-Gun Outfit.

U. S. Equipment Costs Less To Buy, Less To Operate

U. S. Car Washing Equipment is the very latest development in car washing and yet it costs you *less than half of any compressed air outfit*—at the same time you *cut your operating costs at least one-third!* On top of all that you have the simplest equipment you can get and by far the most efficient.

The United States Air Compressor Company
5304 Harvard Avenue Cleveland, Ohio

Manufacturers of U. S. Air Compressors; Complete Paint Spray Units and Car Washing Equipments.

The United States Air Compressor Co.
5304 Harvard Ave.
Cleveland, O.

Send me your latest bulletin on car washing.

Name_____

Street_____

City_____

Interested in (please check) 2-gun equipment _____
4-gun equipment _____

M.A.-2-26

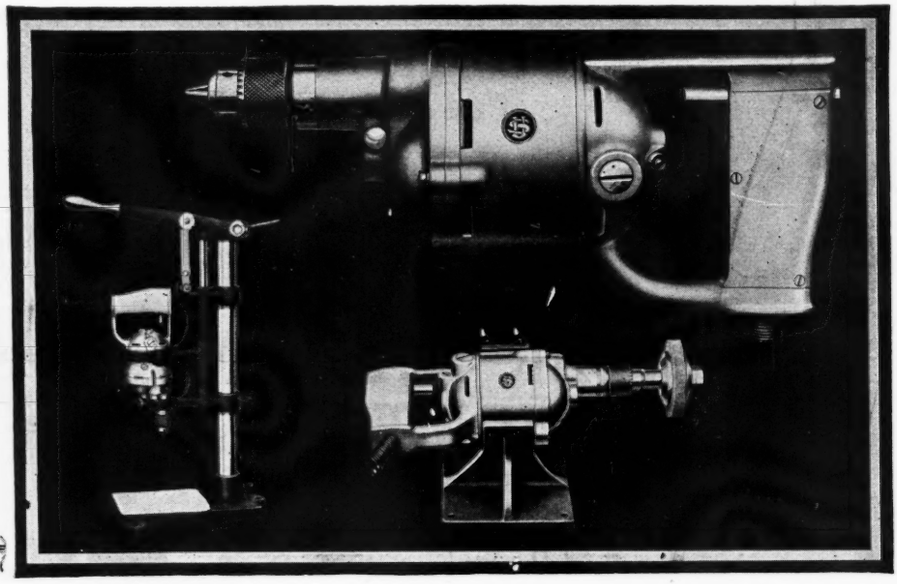
Send coupon for illustrated bulletin and full information on modern car washing methods.

U.S. CAR WASHING EQUIPMENT

U.S.

"The U.S. Equipment Behind the Gun!"

They Make Light Work of Heavy Jobs





Do the Job More Efficiently

$28.00

110, 220 and 32 volts, A. C. or D. C. Grinding stand, arbor and wheel $3.00. Type "Q" Drilling Stand $12.00.

Westinghouse Service

Backing up the "U. S." reputation is the prompt service of Westinghouse. Service shops in 28 leading cities of the U. S. A.

NO use to point out the hundred and one jobs this ¼" Heavy Duty—3 S.K.F. Ball Bearing little giant can do in your shop. The "question before the house" is how to do it better—and with a smaller investment.

U. S. Electric Drills cut in half the time and effort necessary. They are perfectly balanced, sturdily constructed and offer the finest value on the market.

Along with the name "U. S." remember these features—S.K.F. Ball Bearings. Two Pole Trigger Switch (Pat. May, 1914). Hardened chrome nickel steel gears, and many other features which have contributed to their enviable reputation for performance. U. S. Drills are built by the oldest maker of electrical drills and grinders in the world. Since 1897.

Write for Catalog "H"

U.S. Portable Electric Drills Grinders–Polishers

The United States Electrical Tool Co.

Cincinnati, Ohio, U. S. A.


25
Million
in
1925

The $25,000,000 business done by General's one thousand distributors in 1925 is typical of the gains they have made year after year. It looks like $42,000,000 in 1926 for these same distributors—with the addition of only a limited number of new ones, to close up towns where General is not now represented.

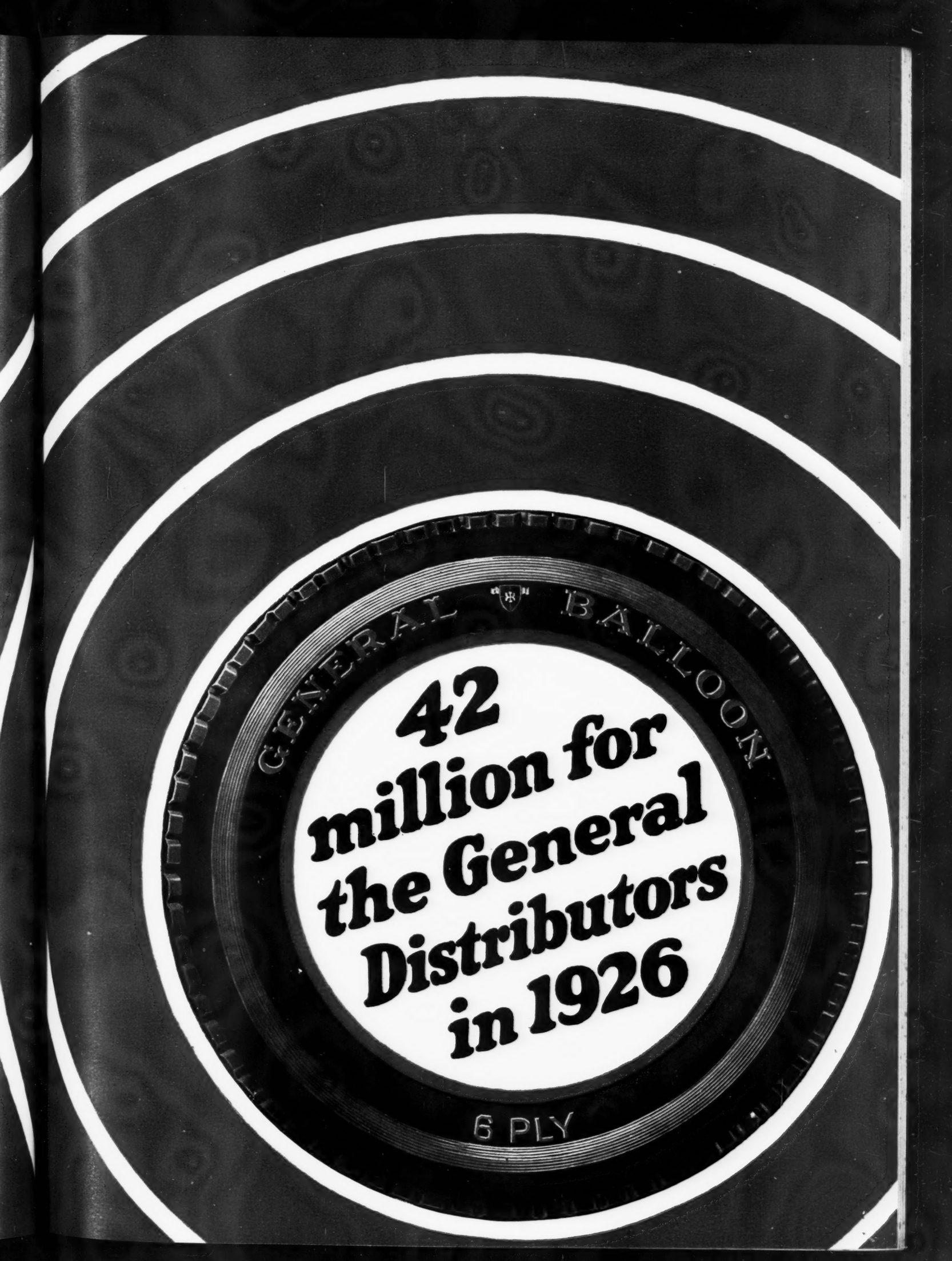
Today, General has by far the largest volume per dealer of any brand on the market.

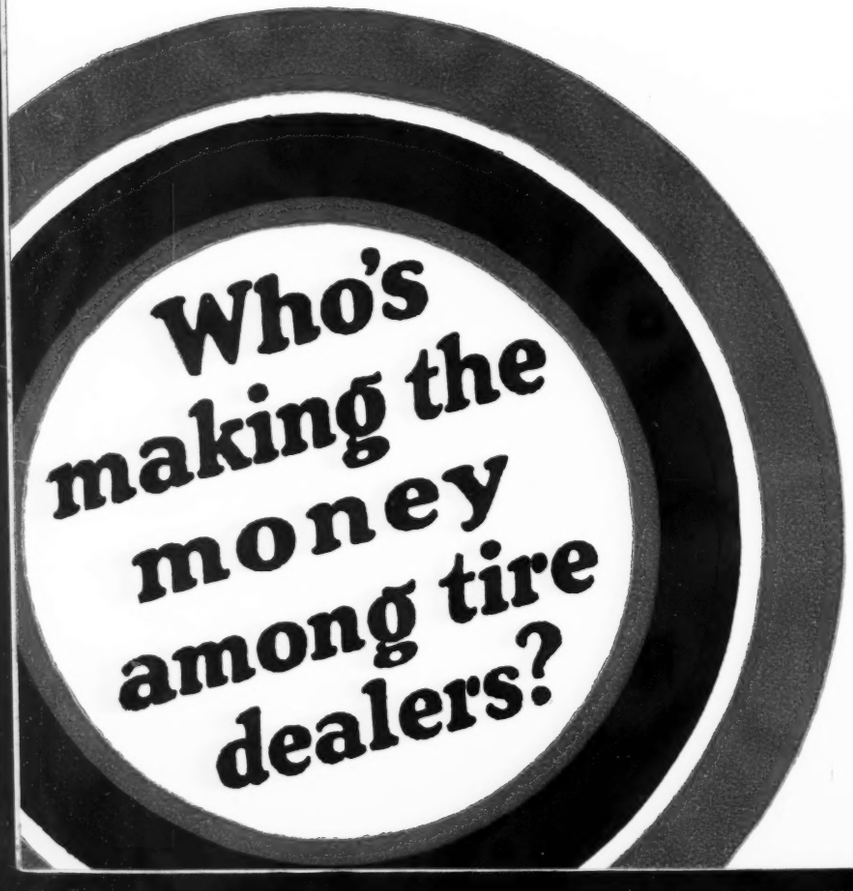
It's not hard to figure who's making the big money among tire dealers, whether in large towns or small.

THE GENERAL TIRE AND RUBBER CO., AKRON, OHIO

The Mark of Leading Tire Stores Everywhere




GENERAL BALLOON
42
million for
the General
Distributors
in 1926
6 PLY


Who's
making the
money
among tire
dealers?

THE LIGHT ADJUSTING STATION

Vol. I. No. 6. PUBLISHED BY THE AMERICAN FLATLITE CO.



Telegraphic Evidence!

—a sweeping demand for flatlites

Every time a live dealer takes on flatlite, the orders start to flow. Why?

Because it is only necessary to demonstrate the wonderful improvement from headlights equipped with flatlite reflectors to sell the customer.

There is no such thing as sales resistance with flatlite reflectors or headlamps.

They are legal in all states. They make perfect road light possible for any car.

Price and ease of installation are both in their favor.

Millions of pairs of flatlite reflectors and headlamps are in use today. You can't drive on any well-traveled road in America without meeting car after car with headlights cutting the night with the bright, full, glareless beam from flatlites.

Who is going to supply the flatlites in your town? Write us for trade particulars.

IMPORTANT TO DISTRIBUTORS
Save the needless expense of telegraphic orders to the factory by carrying an adequate stock of flatlites. The dealer's order is urgent, be prepared to supply him at once *from stock*.

The American Flatlite Co.
Reading Road at Dandridge Street
Cincinnati, Ohio.

flatlite

THE AMERICAN FLATLITE CO.
Reading Road at Dandridge Street
Cincinnati, Ohio

Dept. A

Gentlemen:

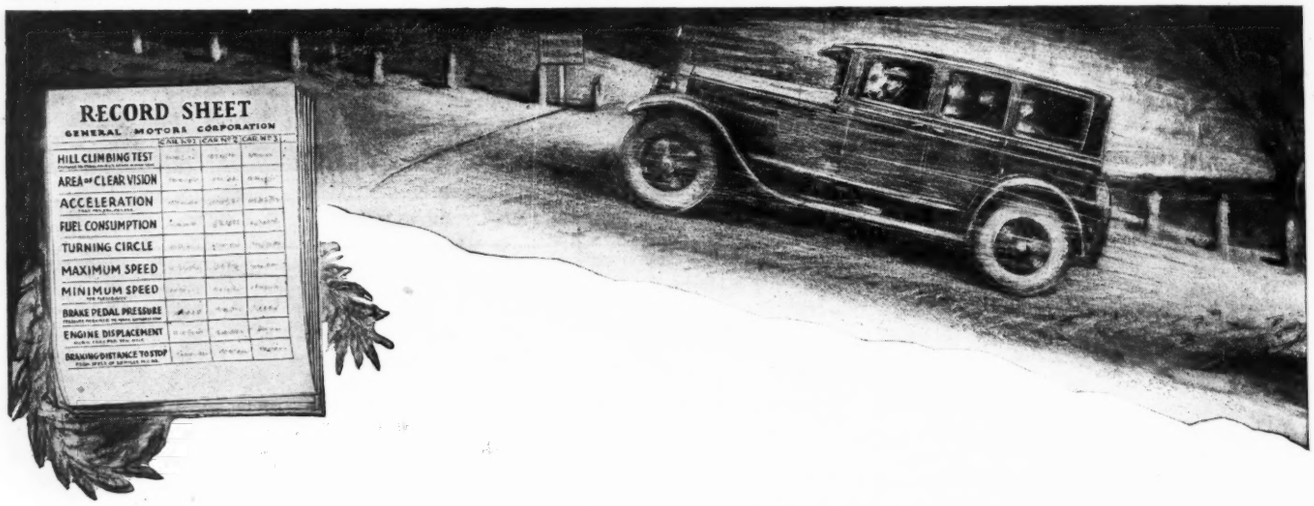
Please send me without charge or obligation booklets and literature on headlight adjusting station equipment, and full trade particulars on flatlite.

NAME_____

ADDRESS_____

☐ Check here if you want copy of "Motor Vehicle Headlighting." A 28-page text book on headlighting. No charge.

CHEVROLET • • • PONTIAC • • • OLDSMOBILE



The greatest proving ground for automobiles

FORTY MILES from Detroit General Motors purchased a great tract of land, comprising farms and woodland, valleys and steep hills.

Roads were constructed up the hills and through the valleys; concrete roads, sand roads, mud roads—every sort of road that an automobile is ever called upon to travel. A mile of concrete speedway was built. A permanent home was erected for the resident engineers who work in shifts so that their tests can continue straight through the night.

Thus, for the first time in automobile history, there is a Proving Ground where cars of all classes can be tested under identical conditions; and the best that the builders of all nations have developed can be studied for the betterment of General Motors cars.

This Proving Ground is an added assurance to you in your purchase of a General Motors car. Point by point, your car has been compelled to prove itself—and has stood the test.

The GMAC Plan of time payments was established by General Motors to make possible the purchase, both wholesale and retail, of its cars on time at the lowest possible cost. Due to the volume of GMAC financing operations, GMAC time payment rates, both wholesale and retail, are lower than ever before.

© G.M.C., 1926

The picture at the right was drawn from life at the Proving Ground.

GENERAL

OAKLAND , , BUICK , , CADILLAC , , GMC TRUCK



MOTORS

95 to 11

these automobile owners prefer demountable wheels!

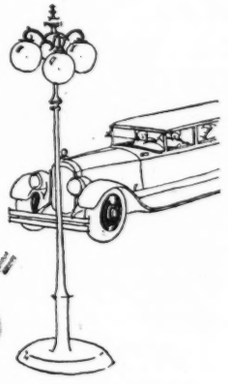
500 questionnaires were sent out to owners of cars equipped with Budd-Michelin Wheels. 110 answers were received. Practically all of those replying had previously owned cars with wood wheels and demountable rims. This question was asked:

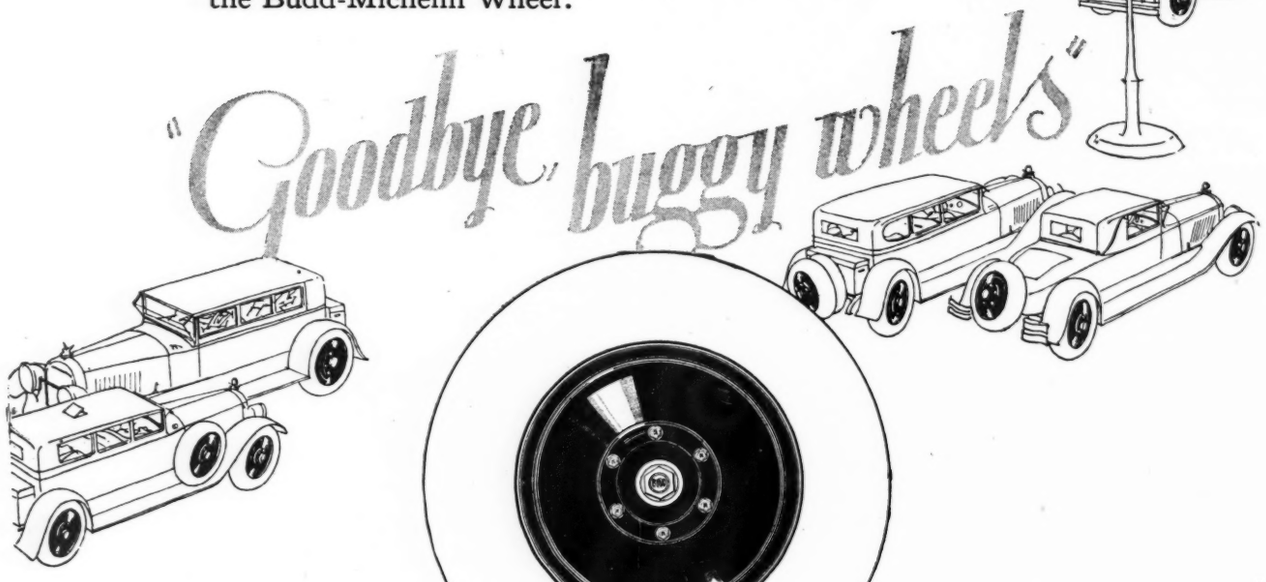
"Which do you prefer, a wheel with demountable *rim*, or a demountable *wheel*?"

This is how they voted:

Demountable rim	11
Demountable wheel	95
No preference	4

That makes it a 10 to 1 bet that *your* customer will prefer the Budd-Michelin Wheel.





BUDD

Detroit - WHEEL COMPANY - *Philadelphia*

Shop Foremen
Mechanics
Repairmen

Throw Away Your "Mikes"

Reboring Tools and Grinders
and Save the Cost of New Pistons
by using

Simplex Piston Rings

4, 6, or 8, Cylinders
(Regardless of Wear or Shape)
+
4, 6, or 8, Old Pistons
(Regardless of Clearance)
+
2 Simplex Piston Rings
Per Cylinder

=

A rebuilt motor, with oil pumping, piston slap or loss compression eliminated

Simplex Piston Rings have many unique features of design and construction. They are the only one-piece side-expanding ring in the field. They will absolutely eliminate piston slap, stop oil pumping and restore loss compression regardless of the wear on pistons and cylinders.

Some exclusive franchises for distributing Simplex Piston Rings in communities from 1,000 to 100,000 population are still available for men now in the automotive industry who can devote enough time and effort to properly sell Simplex Rings, and instruct the trade as to their use.

Simplify With Simplex Piston Rings

Be Sure You Get Them

The Simplex Piston Ring Company, a reputable manufacturer, amply financed, will vigorously prosecute any and all infringers on their rights, this to include Manufacturers, Sellers and Users.

The Simplex Piston Ring Co.

1966 East 66th St. Cleveland, Ohio



Your washing stands
can show still bigger profits

THE Gaylord Water Saving devices will cut your operator's time in half with a distinct saving in labor and water.

The Water Saver fits on the end of the hose. Press the plunger, the water flows. Release and the water shuts off immediately. List price of the Water Saver $2.00.

Six styles of Nozzles give the right stream for every job. The Water Saver with six Nozzles packed in a neat carton—Combination C—list price $3.50.

Wash two cars in the time now required for one

The Gaylord Overhead Washer keeps your hose off the floor—saving wear, tear and kinking. The swivel arm keeps the hose (and the light if required) always at the spot where the work is being done.

Our special design permits the Overhead Washer to swing around the car and last indefinitely without leakage. List price of the Gaylord Overhead Washer No. 1 (without electric light) $16.00. Style No. 2 (with electric light) $34.00.

Combination C and the Gaylord Overhead Washer No. 1—Combination D. List price $18.00. Combination D will save your operator's time and enable him to wash two cars in the time now required for one.

Combination E includes combination C with Overhead Washer No. 2. List price $35.00.

Of special interest to jobbers and dealers

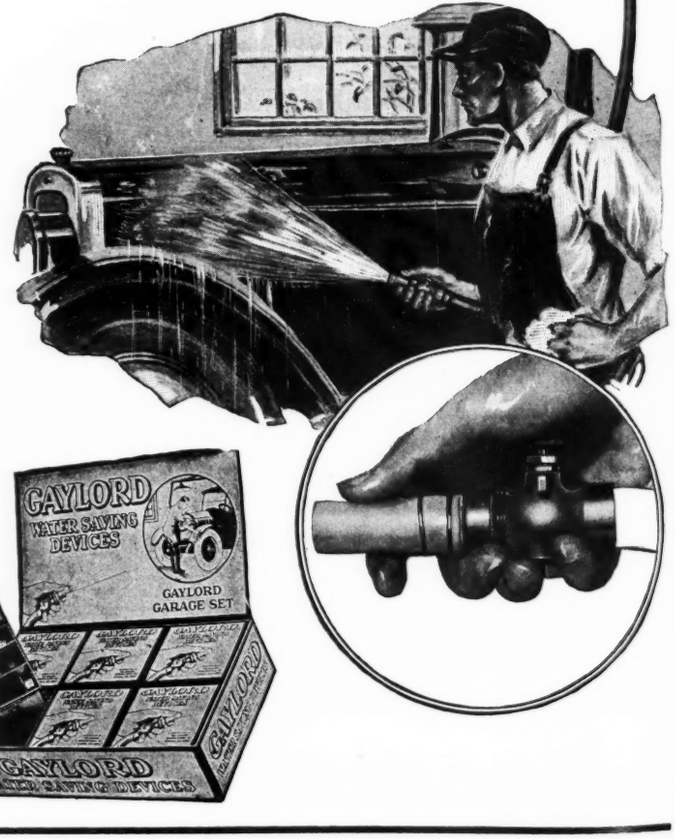
Write today for our booklet "BEATING THE WATER METER" which describes the Gaylord line in detail. Tell us whether you are interested in our jobber or dealer proposition.

Sales Offices: A. K. TROUT CO., Inc.
342 Madison Avenue, New York, N. Y.

Factory:
GAYLORD MANUFACTURING CO.
Paterson, N. J.

GAYLORD
WATER SAVING DEVICES

Jobbers & Dealers:
Write for our proposition;
we'll interest you



The Gaylord Manufacturing Company,
40 Hamilton Street,
Paterson, N. J.
Gentlemen:

Send me one Gaylord Water Saver.....$2.00
and the six Gaylord Nozzles..... 3.00

Total $5.00
at your special Combination price of **$3.50**

Also your booklet "Beating the Water Meter."
Enclosed find my remittance of $3.50 for the above, prepaid.

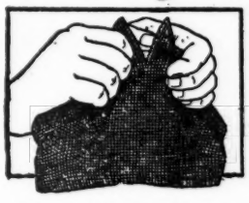
Name .....
Street and Number.....
City and State.....

Orders will be filled separately for Water Savers or Nozzles, if desired.

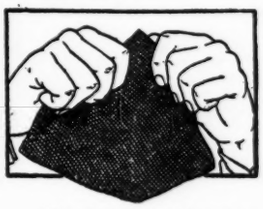
GATES BELTS

"The Standardized Fan Belt"

Try this test



Take a piece of light fabric that you can tear easily in this manner—that is, straight across. Then try to tear it diagonally as in the next picture.



You find that it has double strength on the bias—a good illustration of the extra strength and durability of the bias weave construction.

When you show your customer the simple test given above, he knows you are protecting his interests by selling him the fan belt with the bias weave construction (patented)—the Gates Vulco.

Made by the World's Largest Manufacturers of Fan Belts.



LACQUERS OPEX ENAMELS

Put in an Opex Booth

Rest assured about the simplicity of the whole idea of equipping your shop to give used cars a beautiful up-to-date lacquer finish.

The equipment is simple. We help you get the work going smoothly. The space occupied is small and it only takes a couple days or so to finish each car.

Opex is the Sherwin-Williams **perfected** lacquer with the perfected method of application. It gives a finish smooth as glass, lustrous and strongly resistive to scratches. You can get back every cent of the money it costs to finish a car with a profit in your selling price—no doubt in the world about that.

Send us the coupon printed below. Look into this suggestion. Cut the coupon out and send it now.

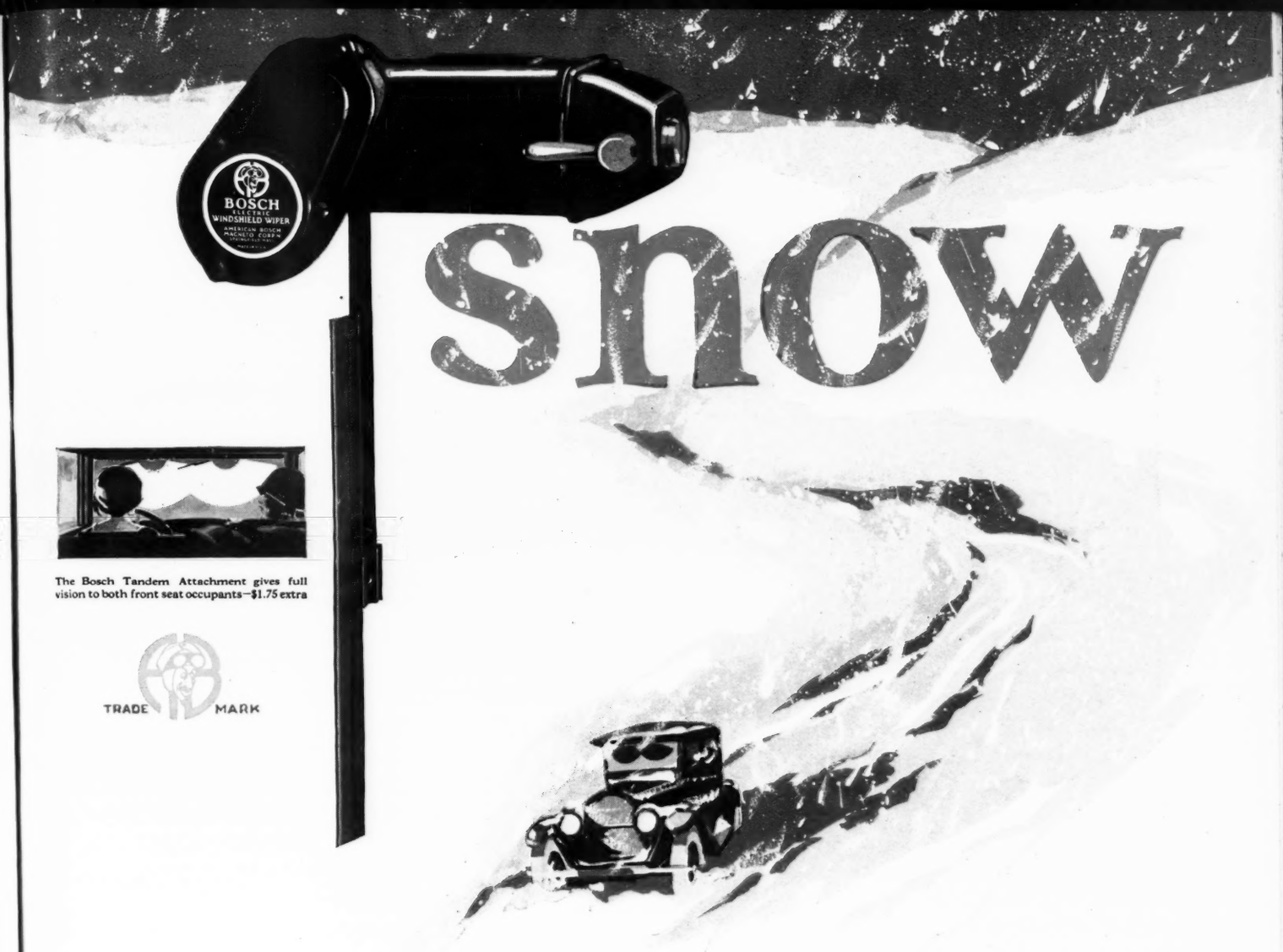
The Sherwin-Williams Co.,
420 Canal Road, Cleveland, O.

Send me, without obligation, full information on your Opex proposition for automobile dealers.

Name .....

Street ..... *Place* .....

SHERWIN-WILLIAMS
PAINTS, VARNISHES AND LACQUERS
COVER THE EARTH



The Bosch Tandem Attachment gives full vision to both front seat occupants—$1.75 extra

TRADE MARK

The Bosch Electric Windshield Wiper wipes the windshield clean and clear in the thickest snow, sleet, slush or rain. You can be absolutely sure that your customers will be perfectly satisfied at all times with the Bosch Windshield Wiper. It costs nothing to run, its speed is constant, it is quiet, it has more than ample power to operate the Tandem attachment. It is simple--requires no attention. Get your stock now and make this accessory your top liner. It sells for $9.50 complete--Tandem attachment $1.75 extra.

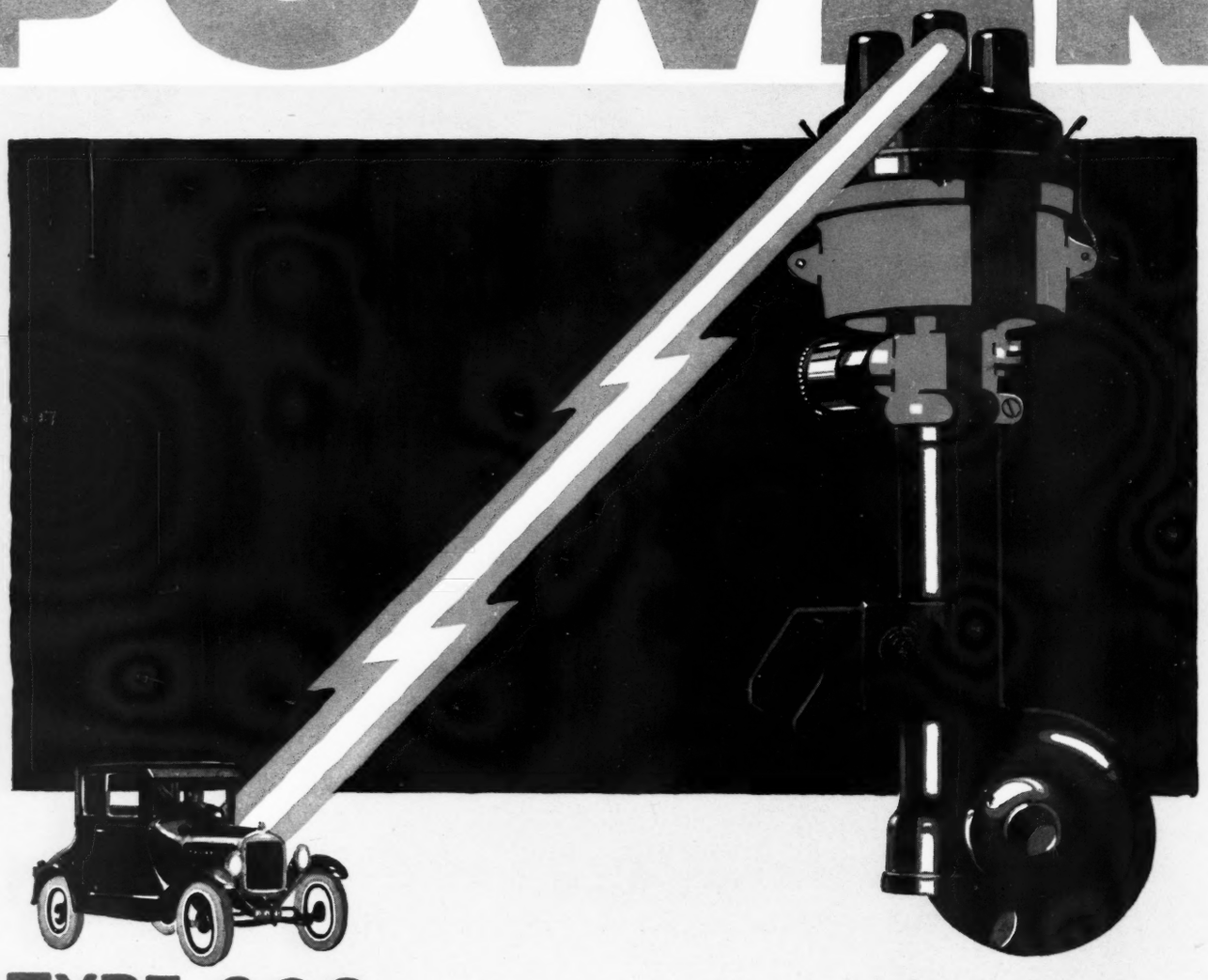
AMERICAN BOSCH MAGNETO CORPORATION

Main Office and Works: Springfield, Massachusetts

Branches: New York Chicago Detroit San Francisco

BOSCH ELECTRIC Windshield Wiper

POWER



TYPE 600 BOSCH Ignition for FORDS

Steep, long hills without changing to low-- many more miles per hour on the long run and quick, fast getaway is what the Bosch Type 600 Ignition means to a Ford Owner.

To the Dealer it means quick, easy sales and constant profits. Bosch Type 600 Ignition for Fords is easy to install and it stays sold-- over 300,000 in use. Wire your order today.

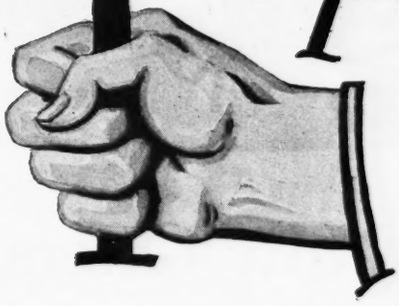
Price $12.75.

AMERICAN BOSCH MAGNETO CORP.
Springfield, Mass.

Branches: New York Chicago Detroit San Francisco



A fan belt that really Grips the pulley



That's Farran-oid.

It has tremendous strength.

Due to the flexibility of the tape backbone and the high grade cover we employ, the belt literally wraps itself around the pulleys.

No danger of overheated motor due to slipping fan belt. Farran-oid Fan Belts are also heat, oil and waterproof. They won't stretch. They are very long-lived.

Dealers like to sell Farran-oid. They know in advance the long satisfactory service they will give. They build good-will and permanent trade for you.

Two types — Herringbone Flat Endless or Dual-flex Molded Cable V-type

THE FARRAN-OID COMPANY, Akron, Ohio

Farran-oid Products

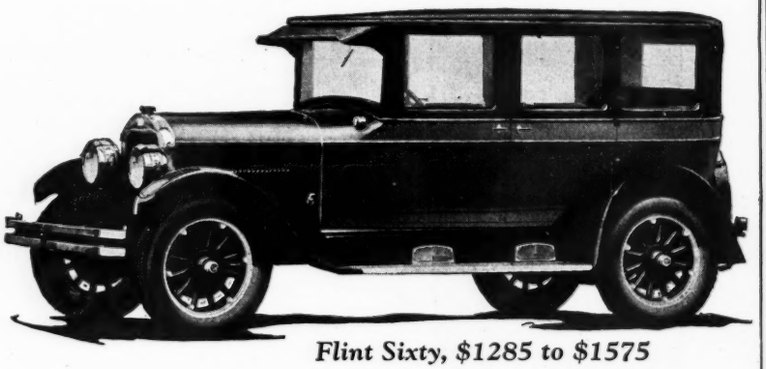
Fan Belts—Radiator Hose—Garage Air Hose — Car Washing Hose — Tire Flaps — Blowout Patches — Tube Patches — Ford Floor Mats



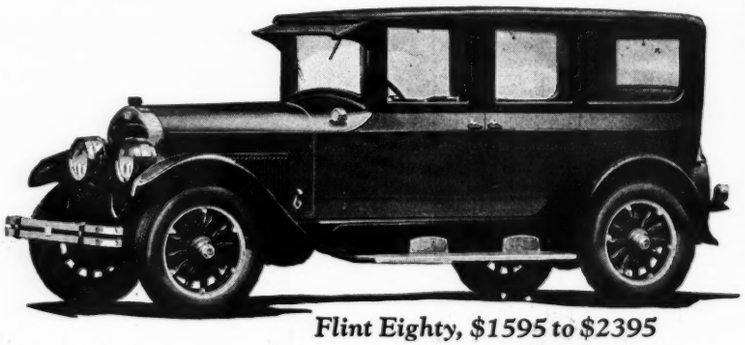
Flint "Junior", $1085—$1185

Flint Now Offers Complete Line

The addition of the Flint "Junior" to the Flint line of cars is not only an important step toward supplying a great public demand for a low priced six of character, but also offers to Flint dealers a complete line of profit-making cars. Write or wire for particulars.



Flint Sixty, $1285 to $1575



Flint Eighty, $1595 to $2395

P. E. Haucell

Vice President & General Manager.

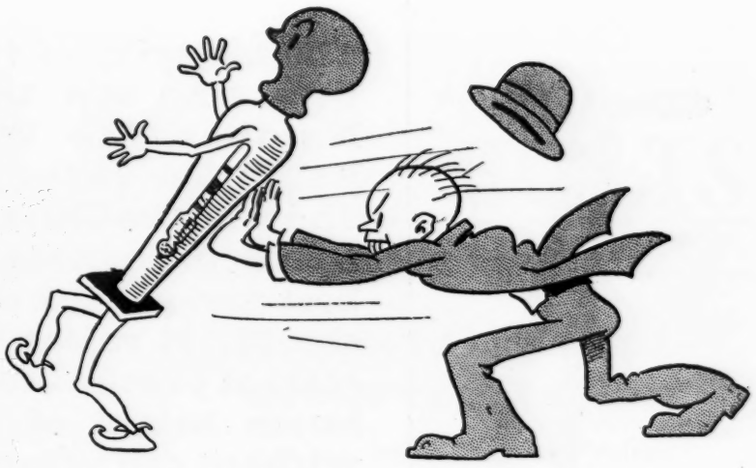
FLINT MOTOR COMPANY · FLINT · MICHIGAN

BUILDERS OF HIGH GRADE MOTOR CARS

FLINT SIX



KANT STICK BATTERY TESTER
"Unless the float is right, the reading is wrong"



How About a Gentle Push Behind BATTERY TESTERS?

Radio has made the public battery-wise to such an extent that together with the car battery market, upwards of 4,000,000 battery testers will be bought during 1926.

Reports from the field show that jobbers everywhere are seeing hydrometers in an entirely new light and are preparing to ride along with this great sweep of public recognition.

We can offer jobbers no better advice than to begin 1926 by suggesting to their dealers window displays and counter displays and a constant keeping before the public this highly necessary battery maintenance item.

Scranton, as always, is prepared to supply hydrometers of any nature—IN ANY PRICE CLASS—jobbers everywhere are realising that it pays to sell Scrantons. Scranton Glass Instrument Co., Scranton, Pa.



Bulbs of Acid-Resisting Red Rubber
Air-tight fit by groove in bulb and flare on barrel. No leaking of air.

SCRANTON
BATTERY TESTERS

Kant Stick	Scranton	Ayanbee	Sturdy Special	Sturdy
$1.00 List	$.85 List	$.75 List	$.75 List	$.65 List

PYRO-ALCOHOL RADIOMETER List Price—75c
(Anti-Freeze Tester)



The majority of the jobbers who saw the new Number 740 Walker Roll-A-Car at the A. E. A. Show at the Chicago Coliseum, pronounced it the best garage jack ever designed. It raises from a start of 5 inches, to a maximum height of 17 in., without cap adjustment, a necessary feature to successfully handle balloon tires. There are eleven other features which every garage man should know before making another purchase. This statement should create in your mind a desire to know them. Send me your name and I will mail them to you.

Willard Walker

President
Walker Manufacturing Co.
Racine, Wis.

5 to 17 inches

the new

Walker Roll-a-Car

"Dependable in Service"

EMPIRE New Process BOLTS

THE STORY OF THE EMPIRE NEW PROCESS BOLT—*Chap. 3. No. 2*

THE two important requisites of a good bolt are that its fit should be perfect and its thread should be strong.

There is a difference of opinion about what is meant by a perfect fit. But unfortunately there is only one Truth. Some think that spinning a nut down the full length of the bolt by a twist of the fingers is proof of a good fit—or they encourage the thought because of the time this method appears to save in assembly work.

Where Speed is Waste

A loose fit is never a good fit, whether it's a suit of clothes or a steel bolt. The nut and bolt are held together not by the natural mating of the threads but by jamming them together when the wrench gives the last pull. This strain causes stripping of threads, fracturing of bolts, backing off of nuts—and all the mischief which these may entail.

Use Empire *New Process* bolts mated to snug fitting nuts, and you will never strip a thread or fracture a bolt or waste a workman's time replacing defective parts. The built-up thread of the *New Process* bolt is tremendously strong, due to the forcing together of the steel molecules under the pressure of the dies—the exact reverse of the *cut*-thread process.

Learn what Empire *New Process* bolts will save you, by testing them yourself for fit and strength. We will send samples. Just ask for them.

A mistake that needs correction

(For the Sake of Your Profits)

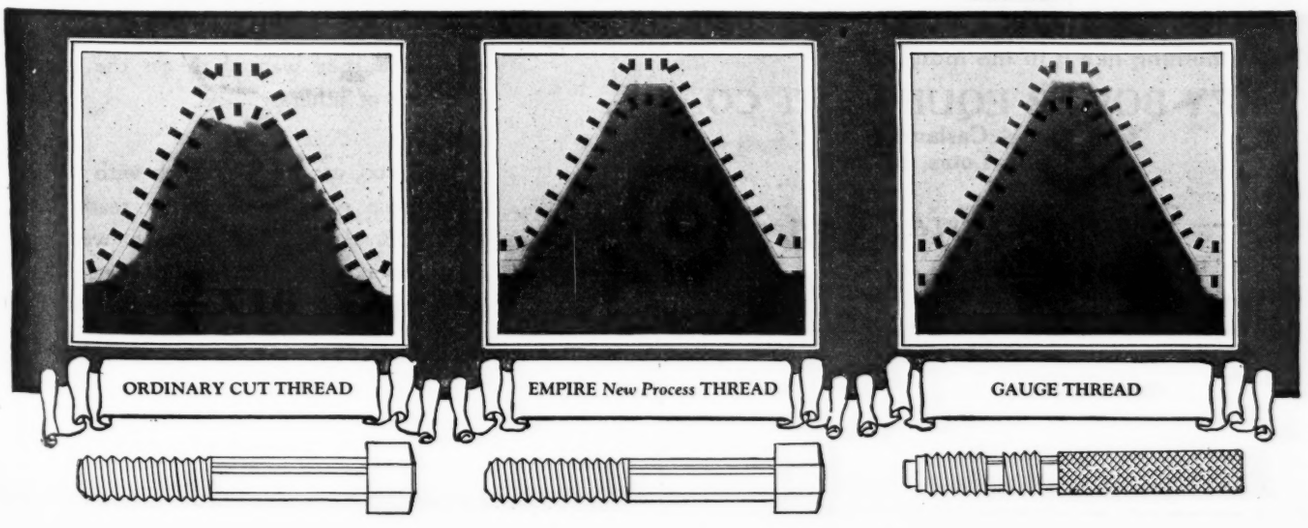


RUSSELL, BURDSALL & WARD BOLT & NUT COMPANY

PORT CHESTER, N.Y.

Branch Office: Straus Building	Branch Office: General Motors Bldg.	Branch Factory:	Strimple & Gillette 169 Jackson Street	Maydwell & Hartzell, Inc. 158-168 Eleventh Street
CHICAGO	**DETROIT**	**ROCK FALLS, Ills.**	**SEATTLE**	**SAN FRANCISCO**

Makers of Bolts, Nuts and Rivets Since 1845



for Power Seal that Joint Perfectly with KEY Graphite Paste



A leak at the cylinder head gasket may mean a limp in the motor.

Cup grease, and make-shifts that melt away are worthless.

Shellac dries up and cracks and does not fill the crevices.

Key Graphite Paste expands with heat and makes a perfect joint. The head and gasket are easily removed.

Use Key on Spark Plug threads, gas line connections, Battery Terminals and a dozen other places.

There's nothing like it in the Industry!

KEY BOILER EQUIPMENT CO.
27th and McCasland Ave.
East St. Louis, Ill.

Send for Trial Can

Key Boiler Equipment Co.
27th and McCasland Ave., East St. Louis, Ill.

Enclosed find 10 cents for which please send me a trial can of Key Graphite Paste.

NAME .....

FIRM .....

ADDRESS .....

JOBBER'S NAME .....

2-11-26

"EXPERIENCE"

WHEN you go to an insurance man with an unusual risk that you want covered you are generally told, "I'll look up our experience on that and let you know what we can do." He then gets in touch with a central bureau where his own and perhaps other companies pool their information on such risks, and he finds out just how such cases have worked out in the past. With the facts in hand he is then prepared to handle the situation intelligently.

One of the reasons MOTOR AGE is published is to do the same thing for the automobile dealer that the central bureau does for the insurance man. It is to make available the experience of the trade—to show you how other men have met problems like your own, and how their methods have worked out.

Fortunately, there is an ample body of "experience" to be found in the automotive field. The only problem is that of placing it in the hands of the average dealer, and that is what MOTOR AGE is doing. Each week we present one or more articles showing just how some particular dealer met and overcame a typical situation and in our "Clearing House" is to be found the information given men who approached us with particular problems of which they wanted to get the experience of others.

You, too, can keep in touch with the experience of your trade by reading MOTOR AGE carefully each week. And when you need help in meeting some particular problem, don't hesitate to call on us.

Low-cost Transportation

Star Cars

ROCK BOTTOM FACTS

Would you like to sell—1. The world's lowest priced six cylinder Touring?
2. The world's lowest priced Six closed car?
3. The world's most powerful low priced Four?
4. The world's most economical Four?
5. The world's highest quality low priced Four?
6. The world's highest quality low priced Six?
7. The world's lowest priced Four-door Six Sedan?

No. 1 is the Star Six Touring.
No. 2 is the Star Six Coupster.
No. 3 is the Star Four.
No. 4 is the Star Four.
No. 5 is the Star Four.
No. 6 is the Star Six.
No. 7 is the Star Six Landau Sedan.

Add to all these obvious advantages—

The most modern low-hung stream line designs.
The most modern lacquer finish and colors.
The roomiest bodies.
Balloon tire equipment, all models except open Fours which have cord tires.
Windshield wipers on all closed models.
Motor driven horns, all models.
Rear view mirrors, all closed models.
An exclusive, very popular model in the Coupster.
Millions of dollars annual advertising support.
Harmonious dealer policies.

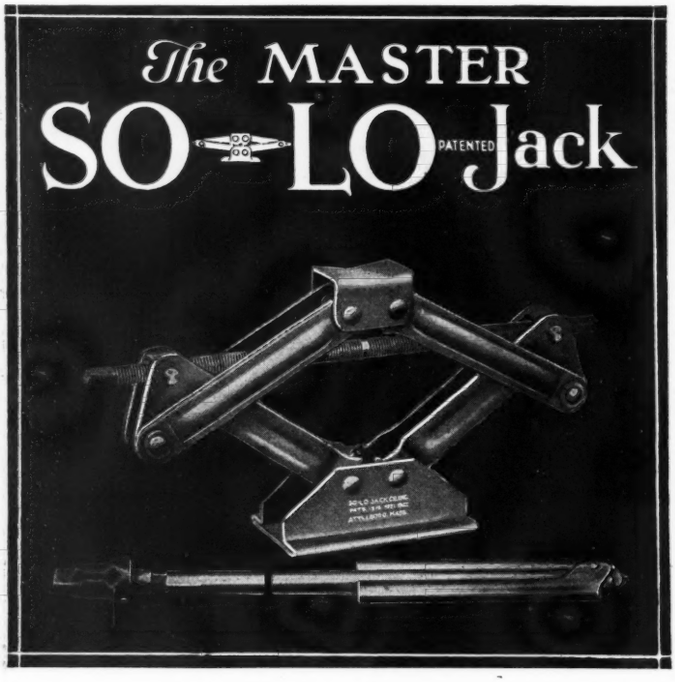
For further details write

General Sales Dept.

Durant Motors Inc., 1819 B'way, New York City
Executive Offices: 250 West 57th St.

Dealers and Service Stations throughout the United States, Canada and Mexico
Plants: Elizabeth, N. J.; Lansing, Mich.; Oakland, Cal.; Toronto, Ont.

NEVER BEFORE A JACK LIKE THIS



BEYOND QUESTION

the Master SO-LO Jack is the perfect Balloon-tire jack.

There's no "almost" about it. It goes down to 4¾ inches, lifts **easily** all the way from that remarkably low point, and goes up to 15½ inches.

And beyond question it is rightly called the Master, for it has the power to lift the heaviest passenger car, and a lot to spare; it has dependable strength, for it is made entirely of steel, ribbed where super-strength is required; it has an extension handle that makes it the easiest jack to place under the car and to operate.

Live dealers will find the Master So-Lo a master seller.

List Price $6.00

West of Mississippi $6.50

(Patented 1916, 1921 and 1922 Other patents pending.)

SO-LO JACK CO., INC.

Attleboro SALES OFFICE **Massachusetts**

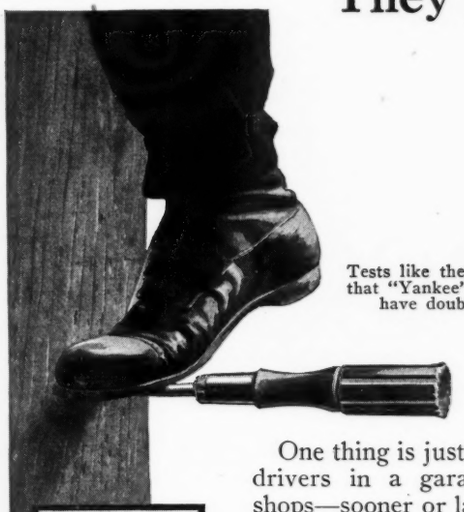
108 Massachusetts Ave., Boston, Mass.

Export Agents: American Steel Export Co. Woolworth Bldg., New York

If your Jobber is not ready to supply you, send us his name with your order.

"YANKEE" SCREW-DRIVERS

Are made to last and— They Do Last



Tests like these have proved that "Yankee" Screw drivers have double strength.



One thing is just as true of screw drivers in a garage as in other shops—sooner or later they have to stand being used for almost every purpose from a chisel to a crowbar.

A "Yankee" Plain Screw-driver is made overstrong. It will stand just such abuse.

A "Yankee" device (found in no other screw-driver) makes blade and handle practically a one-piece tool.



A "Yankee" Driver will stand being driven right through a plank. Used as a chisel it will cut off a strip of steel. Neither operation will result in a split or loose handle, or chipped blade.

Every individual blade is tested twice before leaving factory — another reason why a "Yankee" Driver lasts longer in any kind of service.

No. 90—Standard style, 15 sizes, 1½ to 30 in. blades.
No. 95—Cabinet style, 11 sizes, 2½ to 15½ in. blades.

Some other "Yankee" Tools

Ratchet Screw Drivers	Automatic Feed Bench Drills
Ratchet Breast and Hand Drills	Automatic Feed Chain Drills
Brake Lining Cutter	Ratchet Tap Wrenches
	Vises, with Removable Base

Have you a copy?



Every mechanic finds this free "Yankee" Tool Book interesting and profitable. It shows all "Yankee" Tools, their construction and operation. Write for your copy today.

Dealers Everywhere Sell "Yankee" Tools

"Yankee" on the tool you buy means the utmost in quality, efficiency and durability

NORTH BROS. MFG. CO., Philadelphia, U. S. A.

"YANKEE" TOOLS

Make Better Mechanics

You *need* Biflex

because

The motor car buyer today not only knows what kind of a bumper he wants but he insists upon getting it. He knows the *difference* between a cushion bumper and a non-cushion bumper. He knows that one may save *his life* in a great emergency while the other is merely a traffic guard. More and more the car buyer is saying, *"I want Biflex."*

THE BIFLEX CORPORATION
WAUKEGAN, ILL.
Subsidiary: The Halladay Company, Decatur, Ill.



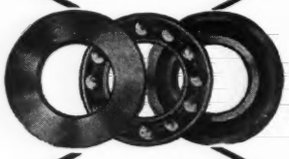
Biflex
Cushion Bumper
Real Protection with Distinction

Halladay Bumpers also are Biflex Built

(50)

STAR BALL RETAINERS

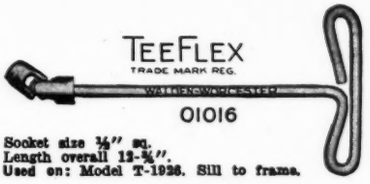
for Thrust, Magneto and Cup and Cone Types of Bearings



THE BEARINGS COMPANY OF AMERICA
Lancaster, Pa.
Western Sales Office, 1012 Ford Bldg., Detroit, Mich.

Definite Purpose Socket Wrenches

FOR FORD CARS 1926 MODELS



Socket size ⅜" sq.
Length overall 13-¾".
Used on: Model T-1926. Sill to frame.

ASK YOUR JOBBER

WALDEN-WORCESTER INCORPORATED
475 SHREWSBURY ST.
WORCESTER, MASS.

EVERY MOTOR NEEDS THEM—

There Is No Substitute



The DeLuxe Skeleton

THE NEW IMPROVED DELUXE

The DeLuxe distributor does not have to worry about price, discounts, nor does he have to increase his overhead by carrying two lines of pistons. He controls a product that is needed by every motor and one for which there is no substitute.

Build your business for the future.

Send for our exclusive agency proposition today

THE DELUXE PRODUCTS CORPORATION
1235 Lake St. LaPorte, Indiana

Standard Equipment on America's Highest Priced Motor Cars

A New Chapter Every Thursday

Each issue of MOTOR AGE is a new chapter, continuing the story of the development of the industry.

And for those who apply the new ideas it gives them, it also continues the story of the development of their individual success.

Read MOTOR AGE every week.

MOTOR AGE

5 So. Wabash Ave. Chicago, Ill.

FOLLETT'S NEW MODEL TIME STAMP

accounts for every labor minute



Learn the interesting details from our descriptive data.

Prints the year, month, day, hour, minute, A.M. or P.M. at the exact moment the plunger is pressed—like this, for example:

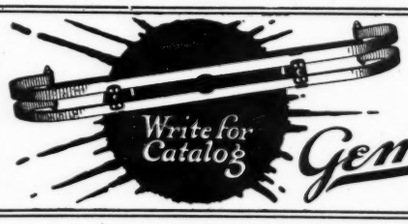
NOV 19 1920 4 31 PM

Tells when a job is started—and when it is finished. There can be no dispute over the time charge.

Absolutely automatic — except for winding. Every machine guaranteed.

Follett Time Recording Co., 217 High Street, Newark, N. J.

"Established Since 1904"



Completely Gemco made, the big selling line

GEMCO MFG. CO.
760 S. Pierce St.
Milwaukee, Wis.

BUMPERS

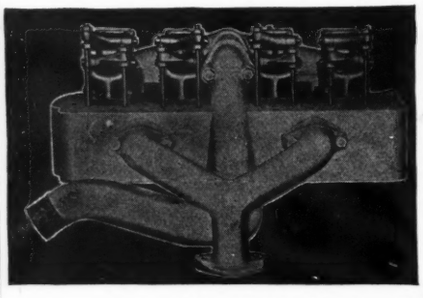
Prest-O-Lite

STARTING AND LIGHTING BATTERIES
Powerful — Dependable — Economical
Backed by a World-wide Service Organization
THE PREST-O-LITE CO., Inc., Indianapolis, Ind.
New York San Francisco
In Canada—Prest-O-Lite Co. of Canada, Ltd., Toronto, Ont.

ROOF 16 OVERHEAD VALVE EQUIPMENT

For Ford and Dodge Motors

ROOF 8 VALVE HEAD FOR FORD MOTOR



Stupendous Power—Lightning Speed

Ford racing cars with Roof Equipment are rivals on mile and one half mile tracks of the highest priced racing cars. Doubles the pulling power of the Ford or Dodge pleasure car or truck. Hill climbing and general road work beyond wildest dreams of the owner. Complete — ready for installation — no machine work necessary.

We are headquarters for all speed equipment. No matter what you want, write us. Racing quality —lowest prices. A postal card brings you complete list of our specialties.

Jobbers—Dealers—Consumers—Write Us.
THE LAUREL MOTORS CORPORATION, ANDERSON, INDIANA

KEYSTONE SELF-LOCKING RADIATOR CAPS

THE FINEST RADIATOR DRESS THAT MEN CAN MAKE OR MONEY CAN BUY.

Keystone EAGLE and Eaglet—Keystone Senior and Junior—Ball-end Bar-Type with Onyx Balls.

Manufactured only by
The NORLIPP COMPANY Chicago

CURTIS

AIR COMPRESSORS-HOISTS-TROLLEYS-CRANES

ST. LOUIS

Curtis Pneumatic Machinery Co.
1527 Kienlen Ave.
St. Louis, Mo.

A Continued Story of the Industry

READING MOTOR AGE every week is very much like following the growth of the automotive industry in story form.

It is as interesting as a fiction serial, and instructive to the point of making better and more prosperous dealers.

Reading MOTOR AGE every week when it comes, assures subscribers that they will stay up to date and profit accordingly.

MOTOR AGE

5 So. Wabash Ave. Chicago, Ill.

TENAX

"Original Blue Sheet"

COMPRESSED

ASBESTOS PACKING

For Cylinder Head Gaskets

There are so many occasions to use TENAX Asbestos Packing and TANPAC Fibre Sheet Packing on motor car overhauling jobs, that mechanics have come to rely on them as standard shop equipment.

TENAX goes wherever there is heat. TANPAC wherever there is no heat. And there are more than 25 uses for them on every car.

Established jobbers handle them.

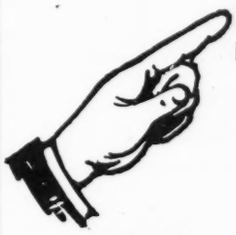
Write for literature covering the entire ADVANCE Line

ADVANCE PACKING & SUPPLY CO.

808 Washington Blvd. Chicago

Pacific Coast Distributors: Allied Industries, Inc., Los Angeles, San Francisco, Portland, Seattle.





Send your name

The new Turner merchandising plan for 1926 will interest you. Let us tell you how we can help to increase YOUR sales. Just send your name—NO OBLIGATION.

TURNER MFG. CO.
Dept. K
Kokomo, Ind., U. S. A.

A novel and effective sales idea that every live dealer should know about. Costs nothing to find out about it. Write today!

TURNER 2 in 1 TIMING UNIT

B & R CAPACITESTER

TESTS ALL BATTERIES UNDER REAL WORKING LOADS



The B & R CAPACITESTER is a new and unique piece of equipment which solves the problem of battery-testing for every battery service station, whether large or small.

The special rheostat allows placing just the proper working load on every battery tested, dependent on the number of plates per cell, without the possibility of mistake, and the Heyer patented meter scale will indicate when the proper load has been reached. Then the button under the thumb is pressed and the cell voltage is read directly on the same meter. Weighing only three pounds and of small size, the B & R Capacitester will test batteries in place with as much ease as a cell-tester. In the shop, it will save valuable minutes per battery tested, as compared to a large discharge set.

PRICE $24.00

Send for special book "The B & R Capacitester"

BURTON-ROGERS CO.
26 Brighton Ave.
Boston, Mass., U. S. A.

PIN THIS TO YOUR LETTERHEAD AND FULL DETAILS WILL BE SENT YOU.

Burton-Rogers Co.
26 Brighton Ave., Boston

I wish information on the CAPACITESTER.

MORRISON

Automatic Double Range

Worm Drive JACKS



Special model for Balloons

Can't Slip or Tilt

Flexible steel "Sure Hold" cap prevents dangerous slipping. Long folding handle (36 to 72 in.) operates from standing position. Gets under overhanging bodies. Easy to work. Few turns and it's up. Built in 11 sizes for all service requirements up to 8 tons. Furnished as standard equipment on fine passenger cars, trucks, buses and Fire Apparatus for past 4 years. The Jack for YOUR shop. Write for sample for test.

THE WOODS ENGINEERING CO., Alliance, Ohio

DILL INSTANT-ONS

Dust and Valve Cap

Off or On in 5 Seconds

The Dill Manufacturing Co. Cleveland, O.

HERE is highest radio quality at lowest price. A chance to get permanent distribution for complete Delano line.

The Delano Sheraton sells for $75—has built-in Delano loud speaker—5 tubes—special Delano hook-up and mahogany cabinet that completely encloses entire set. Wire or mail coupon today.

Modernola Co., Inc.
Johnstown, Pa.

Gentlemen: Please send me full details.

Name_____

Address_____

DELANO RADIO



QUALITY—PROFIT—TURNOVER

American Hammered Piston Rings

American Hammered Piston Ring Company
Baltimore, Maryland

THE WALDEN FORE-LITE

Mounted ahead of the radiator and operated like a spotlight from the instrument board, the WALDEN Fore-Lite satisfies a need hitherto filled by make-shifts. Universal fittings. Selling fast wherever introduced. Ask your jobber, or write us direct, giving his name.



THE WALDEN CO.
1114 S. Michigan Ave. Chicago

PIRMO

NON-EVAPORATING ANTI-FREEZE COMPOUND

ONCE EVERY WINTER

One filling protects radiator from freezing all winter long.

BOYCE & VEEDER CO., Inc., Long Island City, N. Y., U.S.A.

"As Silent as a Shadow"

Quincy Compressors

Quincy, Illinois

J-538

HALL'S CYLINDER HONE

They Won't Come Back

Those jobs won't come back showing oil passing, compression loss and crank-case dilution if you use a Hall Hone. The Hall makes cylinders both round and parallel. Ask your jobber.

THE HALL MFG. COMPANY
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PROTECTOMOTOR

REG. U.S. PAT. OFF.

Perfect Positive Protection

Filters all dust, sand and grit out of air supply to carburetor and motor. Write us for facts.

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Rochester, N. Y.

99 9/10 EFFICIENT

SIOUX

Trade Mark Reg. U.S. Pat. Office

Valve Face Grinding Machine

Get a demonstration of Sioux before you buy any valve grinding machine. GUARANTEED FOR A LIFETIME.

Your Jobber Sells It

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Sioux City, Ia.

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CUSTOM BUILT

Kissel Motor Car Co., Hartford, Wis.

NO TOOLS—It's Self-Closing

Repair Link for Broken Cross Chains



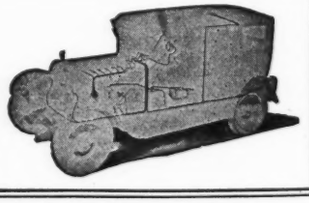
A Self-Closing Monkey Link attached with fingers to loose ends of broken chain closes and locks on first turn of wheel. Stops clanking—saves fender—low priced. Box of 10 Links retails for 25 cents.

Write for samples and discounts. Distributors wanted.

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Rochester, N. Y.

Packard Cable

The Packard Electric Co.
Warren, Ohio



Kawneer

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Write for Special Book Garage Front

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Cushion

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fit behind piston rings and keep them in perfect contact with the cylinder walls at any motor speed or temperature.

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TASCO

Gas Gauge for FORD CHEVROLET and OVERLAND

Sells Quick at $1.25 Retail



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Akron, Ohio

The Original Bosch



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ORIGINAL BOSCH units bear the full name, Robert Bosch, and the trade mark shown at left. These are the identifications of Bosch quality—famous since 1887

Transmissions and Clutches FOR BROWN-LIPE GEAR CO. Trucks, Busses Passenger Cars

QUICK SERVICE ON COMPLETE UNITS OR PARTS

BROWN-LIPE GEAR CO.

SYRACUSE, N. Y.

FISK TIRES

There's a Fisk Tire of extra value in every size, for car, truck or speed wagon



FREDERICKS Rewinding Service

New Rewind Profits—See announcement every 4th week. Write now for price list. The H. M. Fredericks Co., Lock Haven, Pa.



The K-S GASOLINE Telegage

A gasoline gauge on the Dash. Note full page ad in colors in this issue of Motor Age, also half page in Saturday Evening Post, February 20th. Write for description and proposition to the trade.

KING-SEELEY CORPORATION
298 Second Street Ann Arbor, Mich.

TIMKEN Tapered ROLLER BEARINGS

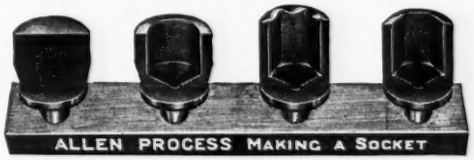
free write for your copy — The Book "AIR PROFITS" Shows how to get more work out of an air compressor. How to use compressed air for many pay jobs.

BRUNNER MFG. CO. UTICA NEW YORK
BRUNNER AIR COMPRESSORS

Lycoming MOTORS

Fine Fours, Sixes and Eights-In-Line

LYCOMING MFG. CO. WILLIAMSPORT, PA.



The Allen Manufacturing Company, Hartford, Conn.

BOLTS BLUE PRINT BUSHINGS — THE B/P LINE

"Made to Blue Print"

"B/P" guarantees to the Replacement Trade the same high standard of Quality and Accuracy demanded by the car manufacturer. "B/P"

The Fostoria Screw Co., Fostoria, Ohio

ZENITH CARBURETOR

More Power Less Fuel

Zenith - Detroit Corporation, Detroit, Mich.



PROTEX TIRE CHAINS

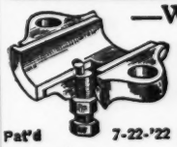
Protex Chain Co., Inc. Waynesboro, Pa.

Absolutely Stop Skid

Many small horseshoes grip the road and prevent slip. The first scientific anti-skid device.

TAKE THE END-PLAY OUT!

—WITHOUT PULLING THE MOTOR



The C. A. ADJUSTABLE CENTER BEARING CAP corrects Ford crankshaft end play and sets magneto for highest efficiency without removing the motor. Easily and quickly installed. Guaranteed for one year. List price $3.75. Ask your jobber or dealer or write us direct.

ADJUSTABLE BEARING CO., Inc.
Dept. M. Brazil, Indiana

CLASSIFIED ADVERTISING

CAR WANTED

WANTED—Roamer-Duesenberg car, chassis or car. Must be cheap. Give full details in answering. Address Box 6260, care Motor Age, 5 S. Wabash Ave., Chicago, Ill.

FOR SALE

FOR SALE—Rotary valve mechanism patents No. 1,152,763, No. 1,189,625. Sole owner, Floyd T. Romberger, 501 Lafayette Life Bldg., Lafayette, Ind.

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HOUSE OF A MILLION AUTO PARTS

The largest stock of new and used car and truck parts in the world. We have everything. Always mention model and serial number in order. Write us. All inquiries answered promptly.

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SAVES 50% TO 75% ON ALL CARS

New and Used Gears—Springs and Axles—Cylinders—Motors—Rear Systems, etc. Wire or Write

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LARGEST CAR WRECKERS IN INDIANA

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C. L. PARKER
Formerly Member Examining Corps, United States Patent Office

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Rod. E. Conomy Broadcasting



for 19 Watkins Rebabbitting Plants

Watkins rods are rebuilt to S. A. E. Specifications, new nuts, bolts, laminated shims and bushings supplied when needed—accurately machined and broached to size with mirror finish—eliminating burdensome hand scraping and insuring quick crankshaft fit.

Send your used rods to the nearest Watkins plant. Have them rebabbitted and rebuilt by Watkins and returned in one day.

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Complete REBABBITTING SERVICE

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Authorized exclusively by the Buick Motor Company to rebabbitt and rebuild Buick Rods.

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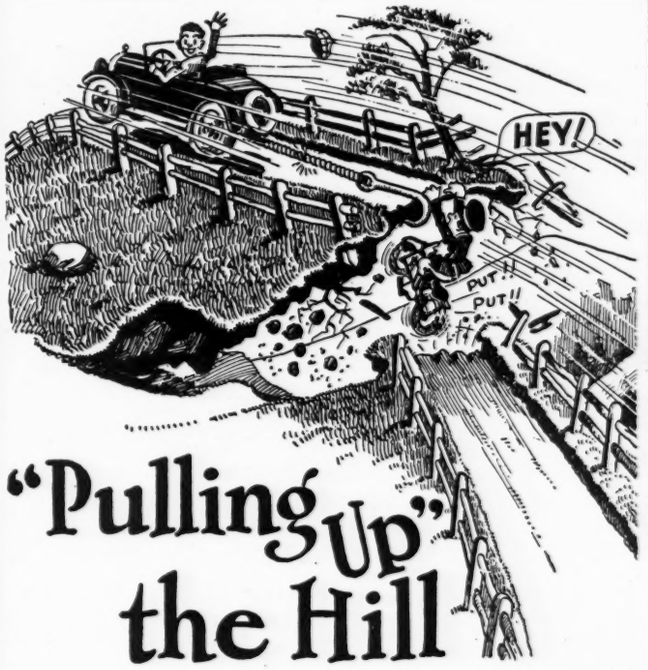
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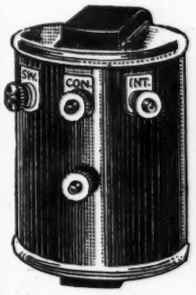


"Pulling Up" the Hill

Nature takes centuries to make hills that a Primax-fired car "pulls up" in a few seconds! Fortunately for the landscape, **not** by the roots as illustrated above — but **in high,** as illustrated daily on steep grades everywhere.

Take off your spark coil—put on a Primax—and **quit shifting** on hills. Primax "shifts" for itself. Also starts cold engines on weak batteries, increases pick-up and speed. Unconditionally guaranteed for life of car. One unit for all jobs—quickly installed.

The fastest selling, most profitable ignition specialty you've ever handled! "Pull up" that coupon now for a mountain of proof!



THORDARSON PRIMAX IGNITION

THORDARSON ELECTRIC MANUFACTURING CO.
Transformer specialists since 1895
WORLD'S OLDEST AND LARGEST EXCLUSIVE TRANSFORMER MAKERS
Chicago, U.S.A.

MAIL THIS COUPON NOW!

THORDARSON ELECTRIC MFG. CO.,
500 West Huron St., Chicago, Ill.

Send complete sales information and net trade prices on Primax Ignition Transformers.

Name .....

Address A2



How Many Times Did You Turn Your Stock in 1925?

THE gilded giraffes, the pink elephants, the spirited horses and whatnot mounted on the rapidly revolving circular platform of the carousel, with bright lights, fluttering flags and its 60 horsepower organ blasting out some blood curdling jazz tune, is a real thriller to the kids—but what is a more inanimate thing than that same carousel standing still—dead, and thereby hangs the tale:

If the stock is not turning the nickels and dimes are not coming in for the proprietor, — and the same thing applies to any other line of business.

Now that inventory time is here clean out the shelf loafers that have done nothing but occupy valuable space and eat up the profits you made on other lines—replace them with products for which there is a constant demand.

The G-H line of Tension Rings, Brake Springs, Valve Springs, Clutch Springs and Piston Pin Retaining Springs offers an unbeatable combination of popular products widely used in the replacement field.

All G-H products are packed in properly labeled boxes—a convenience and saving in stocking. They are priced to show a liberal profit, the original investment is small. The market is unlimited and the turnover is fast. Write for the proposition that will help you make 1926 your banner year.

G-H Tension Ring Company, Inc.

8 East Mount Royal Avenue, Baltimore, Maryland



for Economical Transportation

CHEVROLET

50,000 Testimonials!



—From an actual photograph

C. E. Gambill, President of National Automobile Dealers' Association, inspects greatest collection of testimonial letters ever received in one year by an automobile company.

In 1925

Chevrolet had its greatest year. During that time more than 50,000 testimonials were sent to the Chevrolet Motor Company by owners. This tremendous avalanche of evidence indicates the public appreciation of the car and its performance.

In 1926

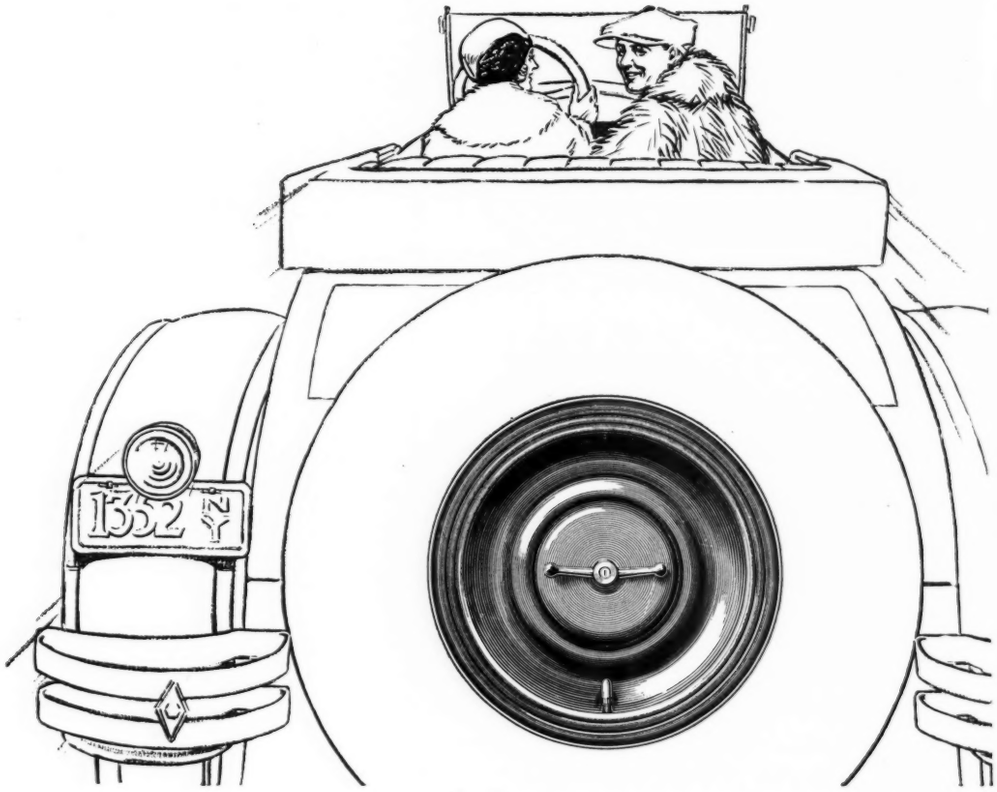
Chevrolet offers the Improved Chevrolet at New Low Prices—thus giving the public in greater degree than ever before—

"QUALITY AT LOW COST"

Touring - -	$510
Roadster - -	510
Coupe - - -	645
Coach - - -	645
Sedan - - -	735
Landau - -	765
½ Ton Truck (Chassis Only)	395
1 Ton Truck - (Chassis Only)	550

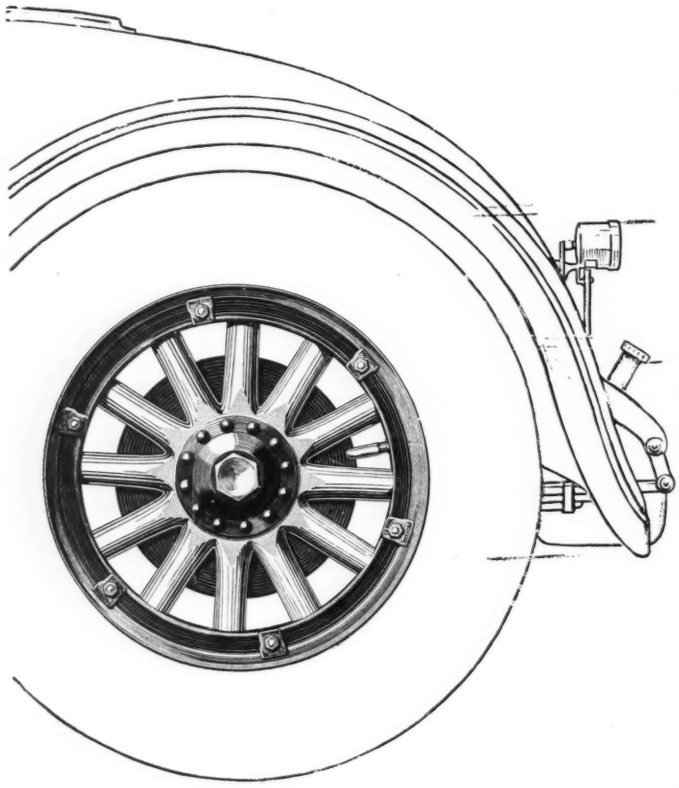
All prices f. o. b. Flint, Michigan

CHEVROLET MOTOR COMPANY
DETROIT, MICHIGAN
Division of General Motors Corporation



Motor Wheel Products

WHOLLY CONSTRUCTIVE



1 Motor Wheel has kept the wood wheel pacemaker of modern wheels—its position is indisputable. *2* Motor Wheel pioneered the features which made the steel wheel practical for all types of cars. *3* Motor Wheel brains developed not only the successful small-diameter wheel, but the balloon tire itself!

. . . . How favorably the industry regards a record so wholly constructive is very clear. In five years Motor Wheel volume has *quadrupled.* Motor Wheel does the largest wheel business in the world. During 1925 Motor Wheel served the biggest body of motor vehicle makers credited to a wheel builder:

AUBURN BUICK CHANDLER CHRYSLER CLEVELAND CUNNINGHAM DAVIS ESSEX FEDERAL FORD GARDNER H. C. S. HUDSON HUPMOBILE JEWETT JORDAN LINCOLN MARMON OLDSMOBILE OAKLAND PACKARD PAIGE PEERLESS REO STUTZ YELLOW

MOTOR WHEEL CORPORATION, LANSING, MICHIGAN